

Service Manual

Cassette Deck

RS-B106

Dolby NR-Equipped
Stereo Cassette Deck

Color

(K)...Black Type
(S)...Silver Type

Color	Areas
(K) (S)	[E].....All European areas except United Kingdom.
(K) (S)	[EK].....United Kingdom.
(K) (S)	[EH].....Holland.
(K) (S)	[EG].....F.R. Germany.
(K) (S)	[XA].....Asia, Latin America, Middle East and Africa.
(K) (S)	[XL].....Australia.

RS-D550W MECHANISM SERIES

SPECIFICATIONS

Deck system	Stereo cassette deck
Track system	4-track, 2-channel
Heads	
REC/PLAY	Solid Permaloy head
Erasing	Double-gap ferrite head
Motors	Electronically controlled DC motor
Recording system	AC bias
Bias frequency	80 kHz
Erasing system	AC erase
Tape speed	4.8 cm/sec.
Frequency response (w/o Dolby N.R.)	
METAL	20 Hz~16 kHz
	30 Hz~15 kHz (DIN)
CrO ₂	20 Hz~15 kHz
	30 Hz~15 kHz (DIN)
NORMAL	20 Hz~15 kHz
	30 Hz~15 kHz (DIN)
Wow and flutter	0.08% (WRMS) ±0.2% (DIN)
Fast Forward and Rewind Time	Approx. 95 seconds with C-60 cassette tape

S/N	(signal level = max recording level, CrO ₂ type tape)
DOLBY NR in	66 dB
DOLBY NR out	57 dB
Input sensitivity and impedance	
MIC	0.25 mV/400 Ω~10 kΩ
LINE	60 mV/47 kΩ
Output voltage and impedance	
LINE	400 mV/1.5 kΩ
HEADPHONES	80 mV/8 Ω
Power consumption	15W
Power supply	
For Australia	AC 50 Hz/60 Hz, 240V
For continental Europe	AC 50 Hz/60 Hz, 220V
For others	AC 50 Hz/60 Hz, 110V/127V/220V/240V
Dimensions (W×H×D)	430 × 115 × 221.5 mm
Weight	3.4 kg

Note:

Specifications are subject to change without notice.
Weight and dimensions are approximate.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

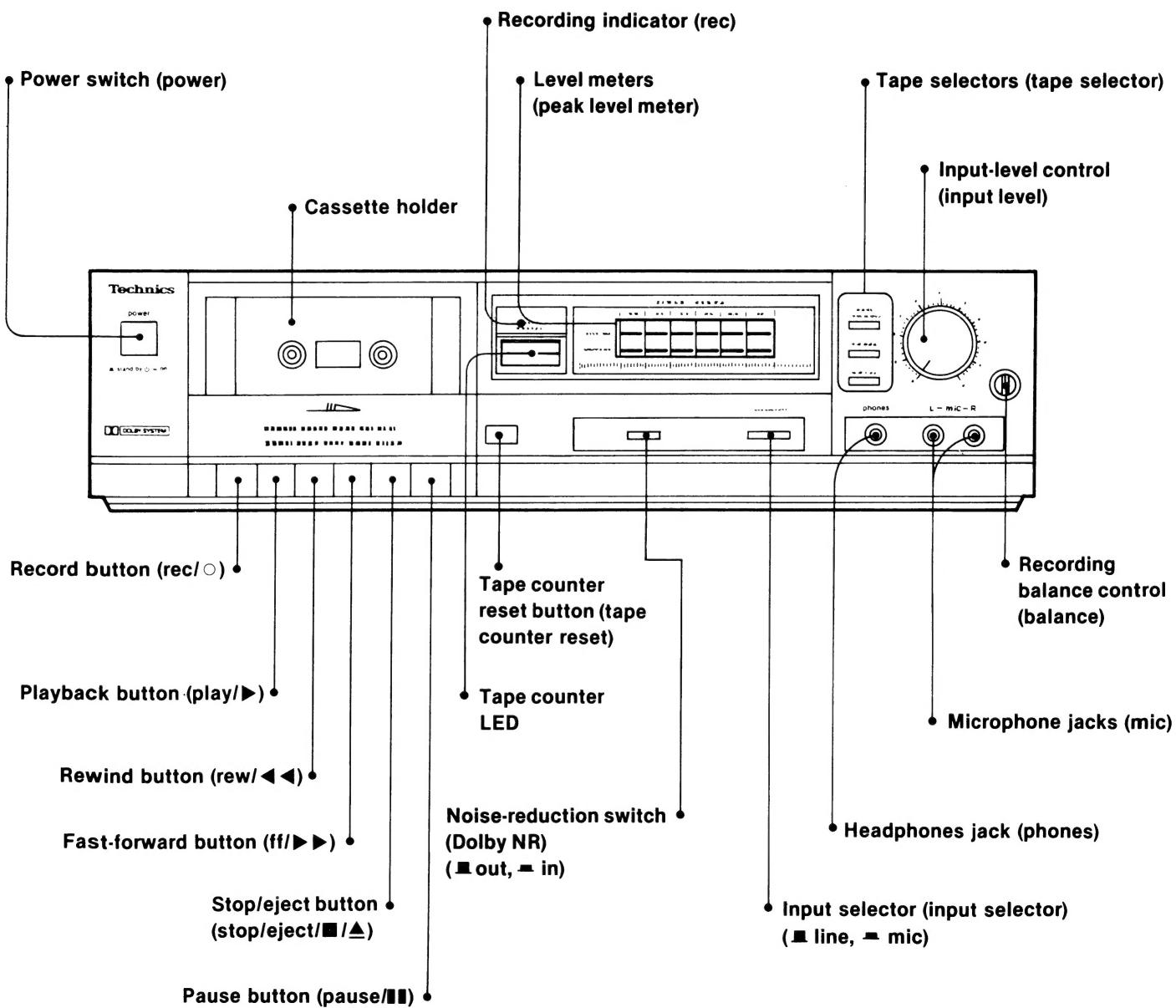
Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

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■ LOCATION OF CONTROL



■ OPERATION

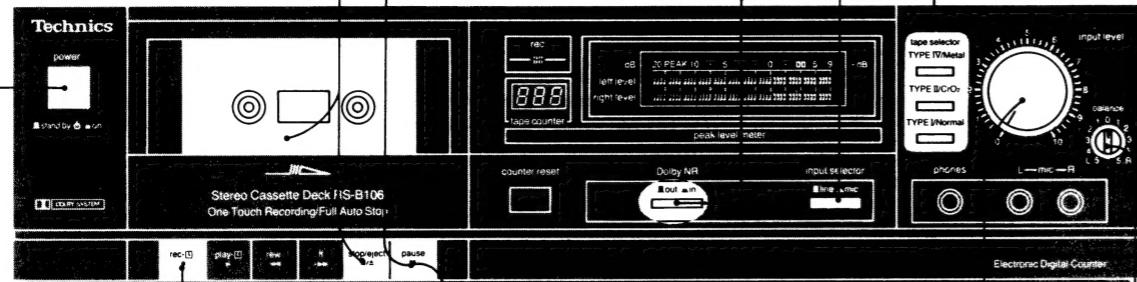
Recording

1 Power: "on" (■→■)

2 Press and insert the tape cassette.



3 Press.



7 Press.
(Recording stand-by mode)

8 Begin the program source to be recorded.

11 Press.
(Recording will begin.)

To erase recorded sounds

1. Set the Dolby noise-reduction switch to the "out" position.
2. Set the input level control to the minimum (0) position.
3. Prepare in the same way as for recording, and then let the tape run.

Note that any sounds on the tape will be automatically erased if a new recording is made on that part of the tape.

Timer Recording/Playback

If an audio timer (option) is connected to this unit, recording of a radio broadcast, or tape playback, will automatically begin at the preset time. Connect the AC power cord of this unit to the power source outlet of the timer. (See the operating instructions of the timer for detailed information.)

Timer recording

1. Prepare for recording.
(Follow steps 1 through 10 of "Recording". After adjusting the recording level, press the stop button and the pause button.)
2. Set the timer to the desired recording-start time.
3. Press the record button.
(At the set time, the power will switch ON and the broadcast will be recorded.)

After setting the timer

Make sure that the power switch is set to the "on" position.

4 "out" or "in".

5 Select the sound source.

6 Set to position corresponding to type of tape to be used.

9 Adjust the recording level.
(Refer to below.)

10 Adjust left/right volume balance.

Adjustment of the recording level

The numbers which you should use as a guide for the adjustment of the tape level will differ depending upon the type of tape.

Normal tape CrO ₂ tape	Metal tape
■ (+3 dB)	+5 dB

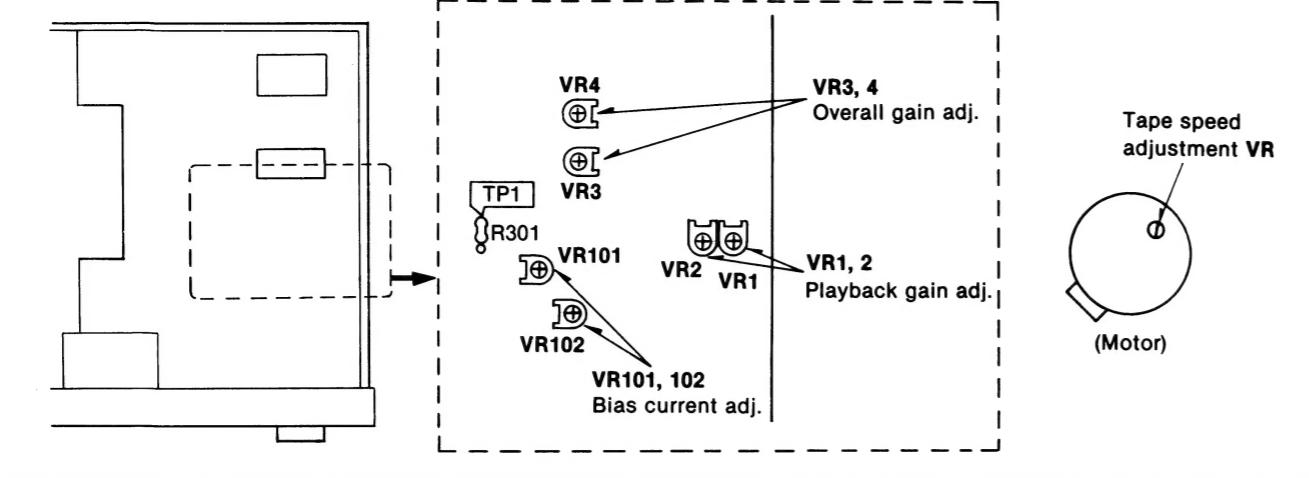
■ DISASSEMBLY INSTRUCTIONS

Ref. No. 1	How to remove the case cover	Ref. No. 2	How to remove the mechanism unit
Procedure 1	• Remove the 4 screws (1~4).	Procedure 1→2	1. Push the eject button (see fig. 1). 2. Remove the 6 screws (1~6). 3. Remove the counter belt (for mechanism).
Ref. No. 3	How to remove the LED meter P.C.B.	Ref. No. 4	How to remove the tape selector P.C.B.
Procedure 1→3	• Remove the 2 screws (1, 2). • Receive the 2 tabs aside.	Procedure 1→4	1. Remove the 2 screws (1, 2). 2. Pull out the volume knob.
Ref. No. 5	How to remove the front panel	Ref. No. 6	How to remove the main P.C.B.
Procedure 1→2→3→4→5	• Remove the 4 screws (1~4).	Procedure 1→6	1. Remove the 2 screws (1, 2). 2. Open the 2 tabs aside, and then pull down the back chassis.

* Serial No. Indication

• The serial number plate of the product is attached to the back chassis (shown in fig. 6).

■ MEASUREMENT AND ADJUSTMENT METHODS



Measurement Condition

- Input level controls; Maximum
- Balance controls; Center
- Tape select switch; Normal
- Dolby NR switch; Out

- Make sure heads are clean
- Make sure capstan and pressure roller are clean.
- Judgeable room temperature $20 \pm 5^\circ\text{C}$ ($68 \pm 9^\circ\text{F}$)

Measuring instrument

- EVM (Electronic Voltmeter)
- Oscilloscope
- Digital frequency counter
- AF oscillator

Test tape

- Head azimuth adjustment (8kHz, -20dB); QZZCFM
- Tape speed adjustment (3kHz, -10dB); QZZCWAT
- Playback frequency response (315Hz, 12.5kHz, 10kHz, 8kHz, 4kHz, 1kHz, 250Hz, 125Hz, 63Hz, -20dB); QZZCFM

- ATT (Attenuator)
- DC voltmeter
- Resistor (600Ω)

- Playback gain adjustment (315Hz, 0dB); QZZCFM
- Overall frequency response, Overall gain adjustment
 - Normal reference blank tape; QZZCRA
 - CrO₂ reference blank tape; QZZCRX
 - Metal reference blank tape; QZZCRZ

Head azimuth adjustment

1. Test equipment connection is shown in Fig. 1.
2. Playback the azimuth adjusted part (8kHz, -20dB) of the test tape (QZZCFM) and regulate the angle adjusting screw so that the outputs of L-CH and R-CH are maximized. (When the adjusting positions are different with L-CH and R-CH, find a position where the outputs of L-CH and R-CH are balanced, and then make the adjustment.)
3. At the same time, draw a lissajous waveform and eliminate phase deflection.

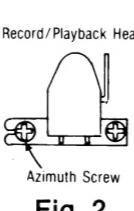


Fig. 2

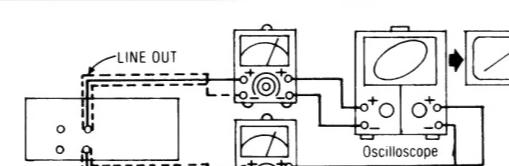


Fig. 1

Tape speed adjustment

1. Test equipment connection is shown in Fig. 3.
2. Playback the middle part of the test tape (QZZCWAT).
3. Adjust the VR in the motor so that the output is within the standard.

Standard value: $3000 \pm 10\text{Hz}$

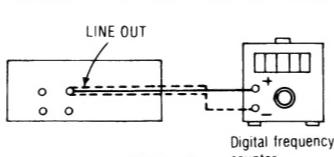


Fig. 3

Playback frequency response

1. Test equipment connection is shown in Fig. 4.
2. Playback the playback frequency response part (315Hz, 12.5kHz~63Hz, -20dB) of the test tape (QZZCFM).
3. Check that the frequency is within the range shown in Fig. 5 for both L-CH and R-CH.

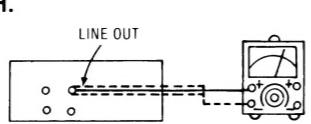


Fig. 4

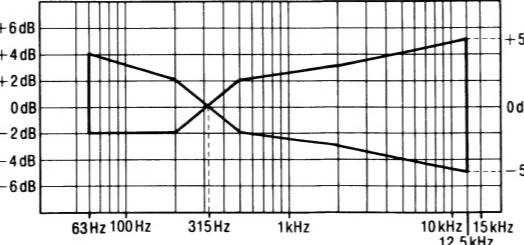


Fig. 5

Playback gain adjustment

1. Test equipment connection is shown in Fig. 4.
2. Playback the playback gain adjusted part (315Hz, 0dB) of the test tape (QZZCFM).
3. Adjust VR1, (L-CH) {VR2 (R-CH)} so that the output is within the standard.

Standard value: $0.4 \pm 0.5\text{dB}$ (0.02V)

Overall frequency response

1. Test equipment connection is shown in Fig. 6.
2. Set the tape selector switch to the normal position.
3. Set a normal blank tape (QZZCRA) and record by applying signal (50Hz, 100Hz, 200Hz, 500Hz, 1kHz, 4kHz, 8kHz and 10kHz), 20dB attenuated from the reference input level signal (1kHz, -24dB).
4. Playback the signal recorded in step 3, and check that the level of each output frequency is within the range shown in Fig. 7 in comparison with the reference frequency (1kHz).
5. If it is not within the standard range, adjust the bias current by VR101 (L-CH) {VR102 (R-CH)} so that the frequency level is within the standard.
 - Level up in high frequency range.....Increase the bias current.
 - Level down in high frequency range.....Decrease the bias current.
6. After that increase the signal recorded on CrO₂ blank tape (QZZCRX) and metal blank tape (QZZCRZ) up to 12.5kHz and adjust in the same way as mentioned above and check that the frequency level is within the range shown in Fig. 8.

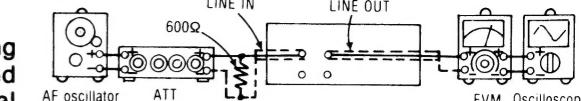


Fig. 6

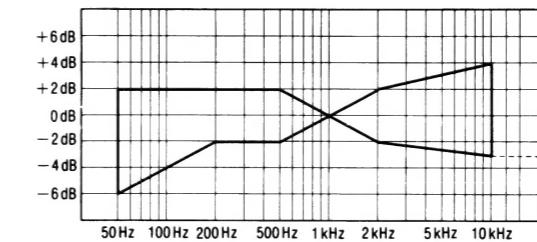


Fig. 7

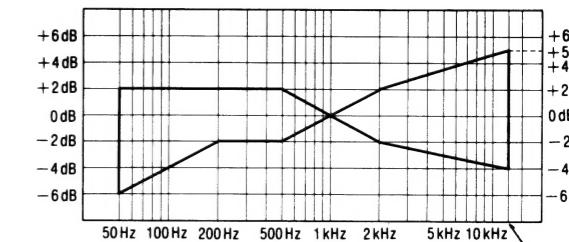


Fig. 8

Overall gain adjustment

1. Test equipment connection is shown in Fig. 6.
2. Set the tape selector switch to the normal position.
3. Set a normal blank tape (QZZCRA) and apply the reference input level signal (1kHz, -24dB) in record pause mode.
4. Adjust the output 0.42V by attenuator and then record.
5. Playback the signal recorded in step 3, and check that the output is within the standard.
6. If it is not within the standard, adjust VR3 (L-CH) {VR4 (R-CH)} and repeat the step (2), (3) and (4) until the output is within the standard.

Standard value: $0.4\text{V} \pm 0.05\text{V}$

Dolby NR circuit

1. Test equipment connection is shown in Fig. 9.
2. Set a normal tape and apply 5kHz signal in record pause mode.
3. Adjust by attenuator so that the output between terminal ⑥ (L-CH) {terminal ⑨ (R-CH)} of IC403 and ground is 12.3mV.
4. Turn NR switch ON, and check that the level changes as specified from the level in NR out mode.

Standard value: $8 \pm 1.5\text{dB}$

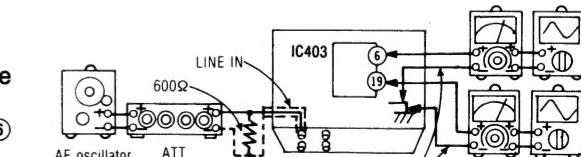
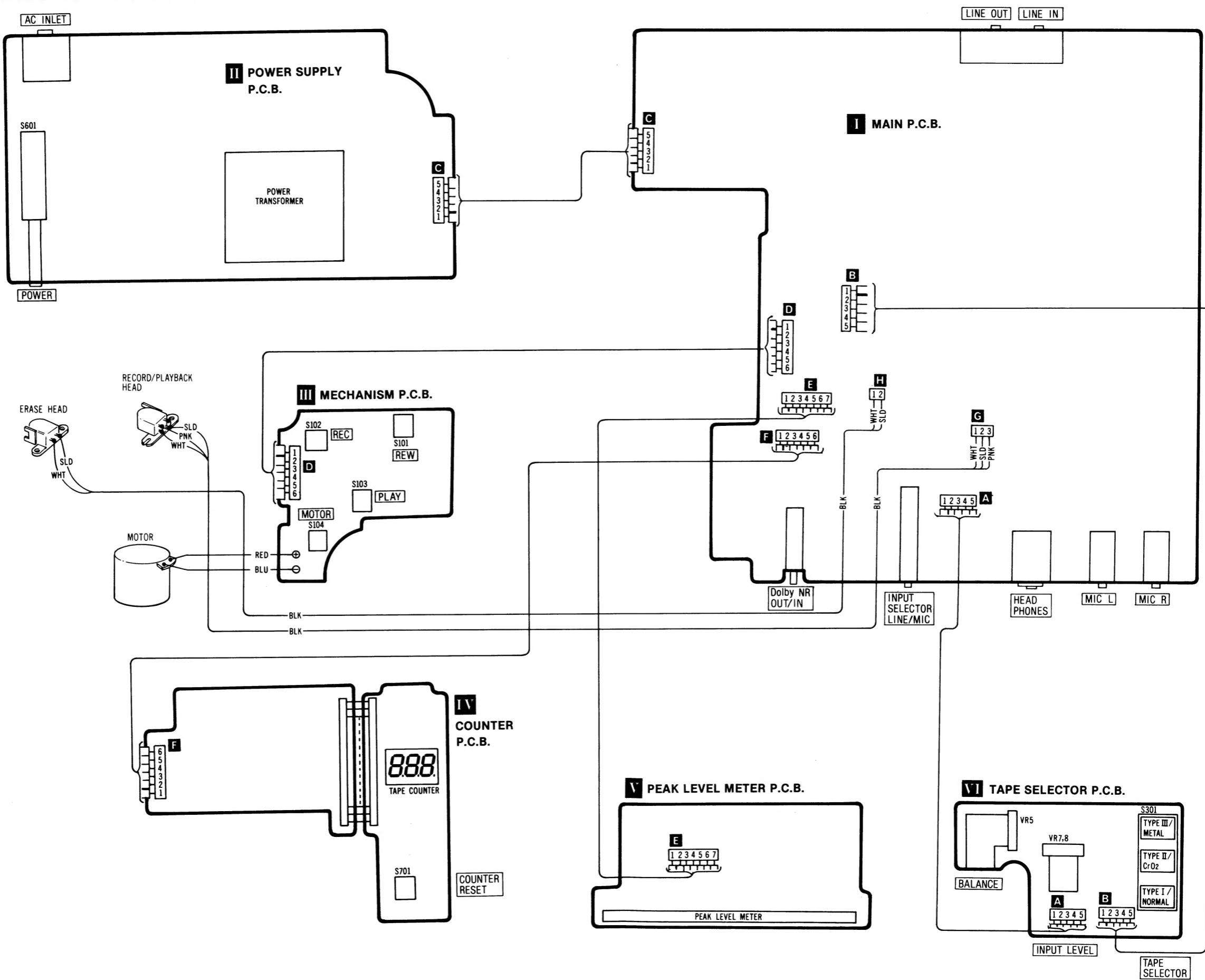


Fig. 9

■ WIRING CONNECTION DIAGRAM



■ RESISTORS AND CAPACITORS

Notes: 1. Part numbers are indicated on most mechanical parts.
Please use this part number for parts order.
2. Important safety notice.
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

Numbering System of Resistor

Resistor Type	Wattage	Tolerance
ERD : Carbon	10 : 1/8W	J : $\pm 5\%$
ERG : Metal Oxide	25 : 1/4W	G : $\pm 2\%$
ERC : Solid	2F : 1/4W	K : $\pm 10\%$
	S2 : 1/4W	
	S1 : 1/2W	
	12 : 1/2W	

Numbering System of Capacitor

Capacitor Type	Voltage		Tolerance
	ECEA Type	Other	
ECEA...N : Non-polar Electrolytic	2R3 : 2.3V	05 : 50V DC	C : $\pm 0.25\mu F$
ECEA : Electrolytic	DC	1H : 50V DC	J : $\pm 5\%$
ECCD : Ceramic	OJ : 6.3V	1 : 125V DC	K : $\pm 10\%$
ECKD : Ceramic	1C : 16V	2H : 500V DC	Z : $+80\%, -20\%$
ECQM : Polyester	1E : 25V	KC : 400V AC	M : $\pm 20\%$
ECQV : Polyester	1V : 35V		
ECQP : Polyester	1H : 50V		
ECKF : Ceramic	50 : 50V		
	25 : 25V		
	2A : 100V		

• RESISTORS

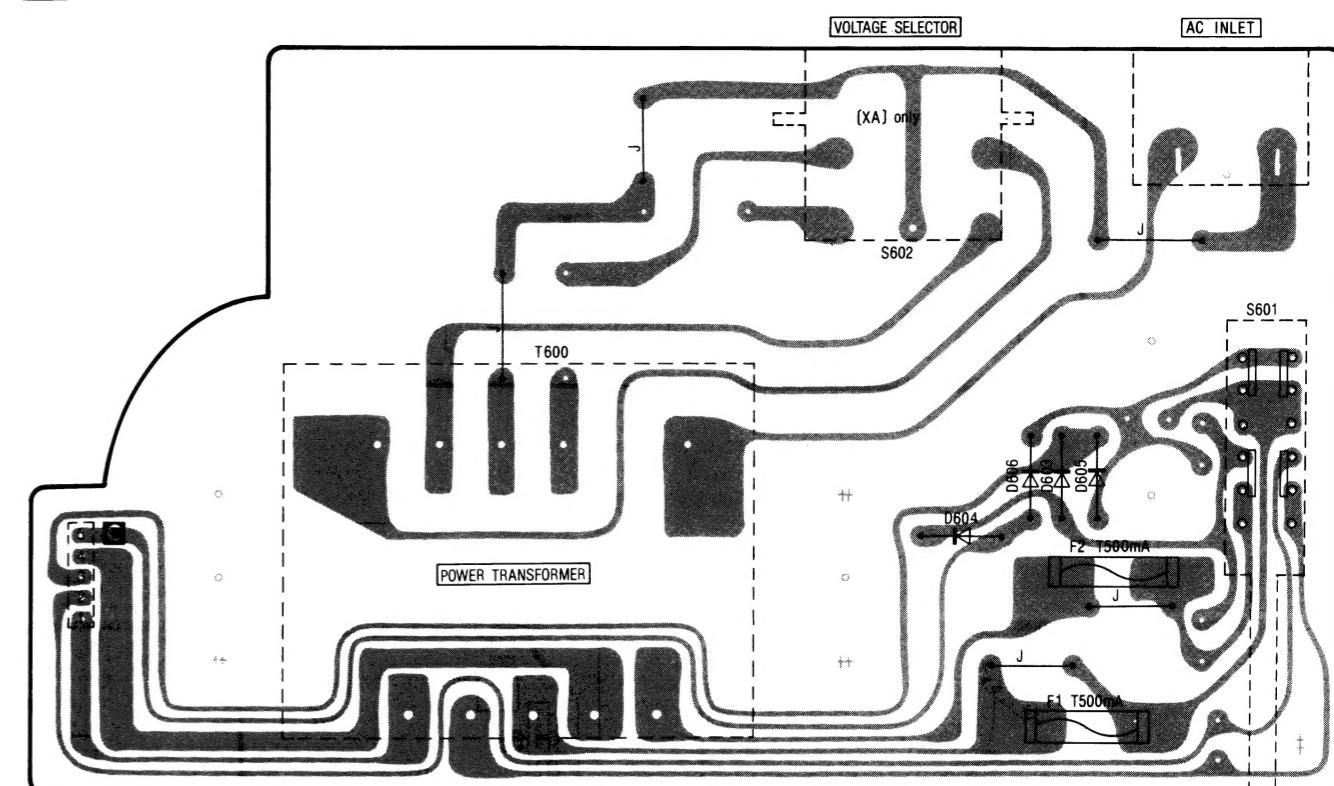
Ref. No.	Part No.	Value	Ref. No.	Part No.	Value	Ref. No.	Part No.	Value
R1, 2	ERDS2TJ101	100	R80	ERDS2TJ222	2.2k	R307	ERDS2TJ561	560
R3, 4	ERDS2TJ155	1.5M	R81, 82	ERDS2TJ222	2.2k	R308	ERDS2TJ221	220
R5, 6	ERDS2TJ104	100k	R83, 84	ERDS2TJ472	4.7k	R309	ERD2FCG820	82
R7, 8	ERDS2TJ101	100	R85, 86	ERDS2TJ223	22k	R311	ERDS2TJ473	47k
R9, 10	ERDS2TJ820	82	R87, 88	ERDS2TJ393	39k	R313	ERDS2TJ391	390
R11, 12	ERDS2TJ562	5.6k	R89, 90	ERDS2TJ682	6.8k	R401	ERDS2TJ242	2.4k
R13, 14	ERDS2TJ274	270k	R91, 92	ERDS2TJ272	2.7k			
R15, 16	ERDS2TJ472	4.7k	R95, 96	ERDS2TJ221	220	R451, 452	ERDS2TJ184	180k
R17	ERDS2TJ103	10k	R97, 98	ERDS2TJ223	22k	R455, 456	ERDS2TJ473	47k
R18	ERD25FJ103	10k	R99, 100	ERDS2TJ331	330	R457, 458	ERDS2TJ472	4.7k
R19, 20	ERDS2TJ104	100k	R101	ERDS2TJ473	47k	R461, 462	ERDS2TJ473	47k
R22	ERDS2TJ473	47k	R105, 106	ERDS2TJ103	10k	R463, 464	ERDS2TJ332	3.3k
R23	ERD25TJ333	33k	R113, 114	ERDS2TJ102	1k	R468	ERD25FJ242	2.4k
R24	ERDS2TJ103	10k	R115, 116	ERDS2TJ473	47k	R470	ERDS2TJ103	10k
R26	ERD25FJ220	22	R119, 120	ERDS2TJ184	180k	R471	ERDS2TJ102	1k
R27, 28	ERD25FJ101	100	R121, 122	ERD25FJ102	1k	R472	ERD25FJ105	1M
R29, 30	ERD25TJ101	100	R123, 124	ERDS2TJ151	150			
R31, 32	ERDS2TJ273	27k	R125, 126	ERDS2TJ560	56	R601, 602	ERDS2TJ681	680
R33	ERDS2TJ222	2.2k	R128	ERDS2TJ102	1k	R701	ERDS2TJ102	1k
R35	ERDS2TJ103	10k	R129, 130	ERDS2TJ103	10k	R703	ERDS2TJ472	4.7k
R37, 38	ERDS2TJ155	1.5M	R131	ERDS2TJ103	10k	R705	ERDS2TJ683	68k
R39, 40	ERDS2TJ683	68k	R201	ERG1SJ470	47	R707, 708	ERDS2TJ472	4.7k
R43, 44	ERDS2TJ473	47k	R202	ERG12SJ680	68	R711	ERDS2TJ102	1k
R45, 46	ERDS2TJ273	27k	R217	ERDS2TJ272	2.7k	R721, 722	ERDS2TJ912	9.1k
R47, 48	ERDS2TJ102	1k	R218	ERDS2TJ103	10k	R723, 724	ERDS2TJ103	10k
R49, 50	ERDS2TJ122	1.2k	R220	ERDS2TJ272	2.7k	R725	ERDS2TJ102	1k
R51, 52	ERDS2TJ154	150k	R221	ERDS2TJ333	33k			
R53, 54	ERD25FJ222	2.2k	R222	ERDS2TJ153	15k	R729	ERDS2TJ103	10k
R63, 64	ERDS2TJ561	560	R223	ERDS2TJ101	100	R731, 732	ERDS2TJ273	27k
R65, 66	ERDS2TJ103	10k	R301	ERD25FJ1R0	1	R733, 734	ERDS2TJ222	2.2k
R68	ERDS2TJ562	5.6k	R303, 304	ERDS2TJ223	22k	R735, 736	ERDS2TJ102	1k
R79	ERD25FJ222	2.2k	R305, 306	ERDS2TJ100	10	R751	ERDS2TJ560	56

• CAPACITORS

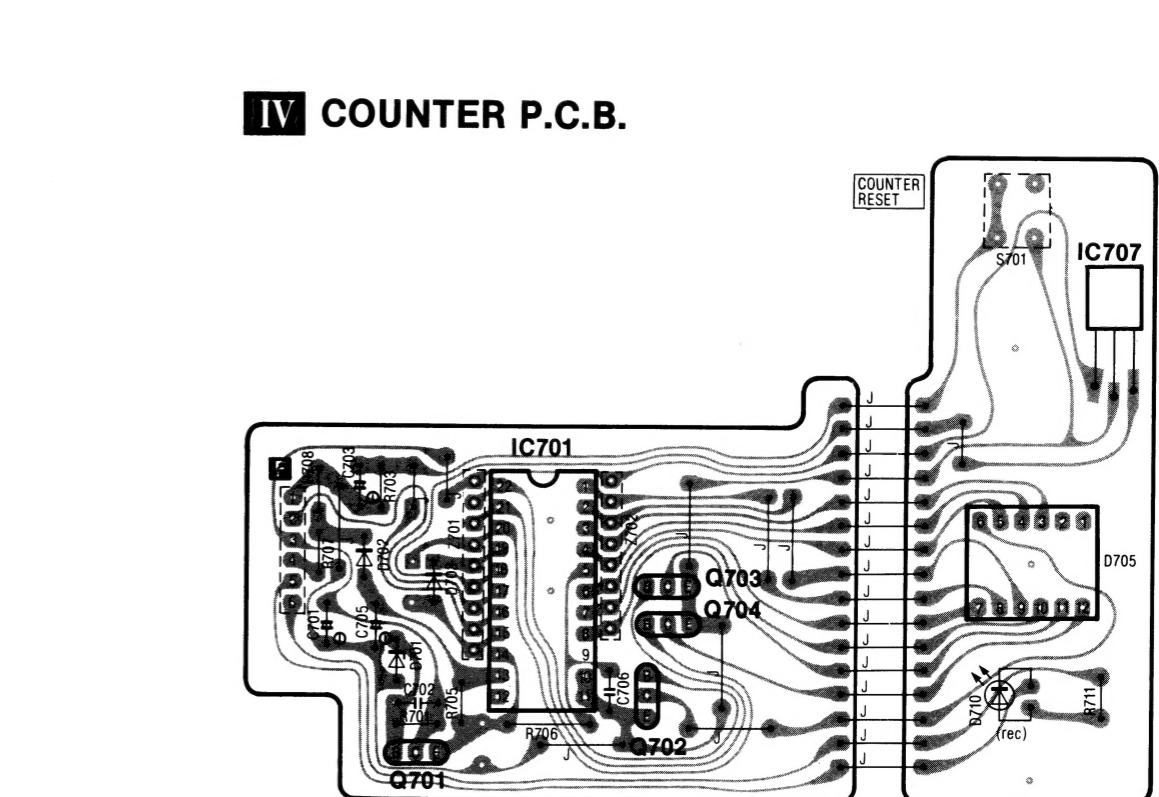
Ref. No.	Part No.	Value	Ref. No.	Part No.	Value	Ref. No.	Part No.	Value
C1, 2	ECKD1H122KB	0.0012	C67, 68	ECQB1H562KZ	0.0056	C455, 456	ECQV1H473JZ	0.047
C3, 4	RCBS1H681KBY	680p	C69, 70	ECQB1H472KZ	0.0047	C457, 458	ECQB1H333JZ	0.033
C5, 6	RCBS1H101KBY	100p	C71, 72	ECQB1H392KZ	0.0039	C459, 460	RCBS1H221KBY	220p
C7, 8	ECEA0JU101	100	C73, 74	ECEA1HU010	1	C461, 462	ECQB1H472JZ	0.0047
C9, 10	RCBS1H681KBY	680p	C75, 76	RCBS1H561KBY	560p	C463, 464	ECEA1EU4R7	4.7
C11, 12	ECCB1H123JZ	0.012	C77, 78	RCBS1H121KBY	120p	C466	ECEA1CU100	10
C13, 14	ECEA1CU100	10	C83, 84	ECCD1H220J	22p	C601, 602	EGBT1E223ZF	0.022
C18	ECEA1HU010	1	C101, 102	ECCD1H101J	100p	C603, 604	ECEA1CU221	220
C31, 32	ECEA1CU100	10	C103	ECEA1CU100	10	C605, 606	ECEA1CU222	2200
C33, 34	RCBS1H101KBY	100p	C104	ECEA1CU331	330	C701	ECEA1CU470	47
C35, 36	ECCD1H220J	22p	C301	ECQP1153JZ	0.015	C702	ECKD1H122KB	0.0012
C37, 38	ECEA1HU010	1	C302	ECEA1EU4R7	4.7	C703	ECEA1HU2R2	2.2
C39, 40	EGBT1E223ZF	0.022	C303, 304	ECQB1H562KZ	0.0056	C705	ECEA1HU2R2	2.2
C41, 42	ECEA1HUR22	0.22	C305, 306	ECQB1H472KZ	0.0047	C706	RCBS1H221KBY	220p
C43, 44	RCBS1H221KBY	220p	C308	ECEA1CN100	10	C721, 722	ECQV1H563JZ	0.056
C47, 48	ECEA1CU221	220	C309	ECEA1AU220	22	C727, 728	ECEA1CU330	33
C53, 54	ECEA1CU100	10	C310	ECEA1HU010	1	C731	EGBT1E223ZF	0.022
C61, 62	ECEA1HU2R2	2.2	C450	ECEA1HU010	1	C732	ECEA1CU220	22
C63, 64	ECQB1H222KZ	0.0022	C451, 452	ECQV1H104JZ	0.1			
C65, 66	ECQB1H682KZ	0.0068	C453, 454	ECQV1H334JZ	0.33			

■ PRINTED CIRCUIT BOARDS

II POWER SUPPLY P.C.B.

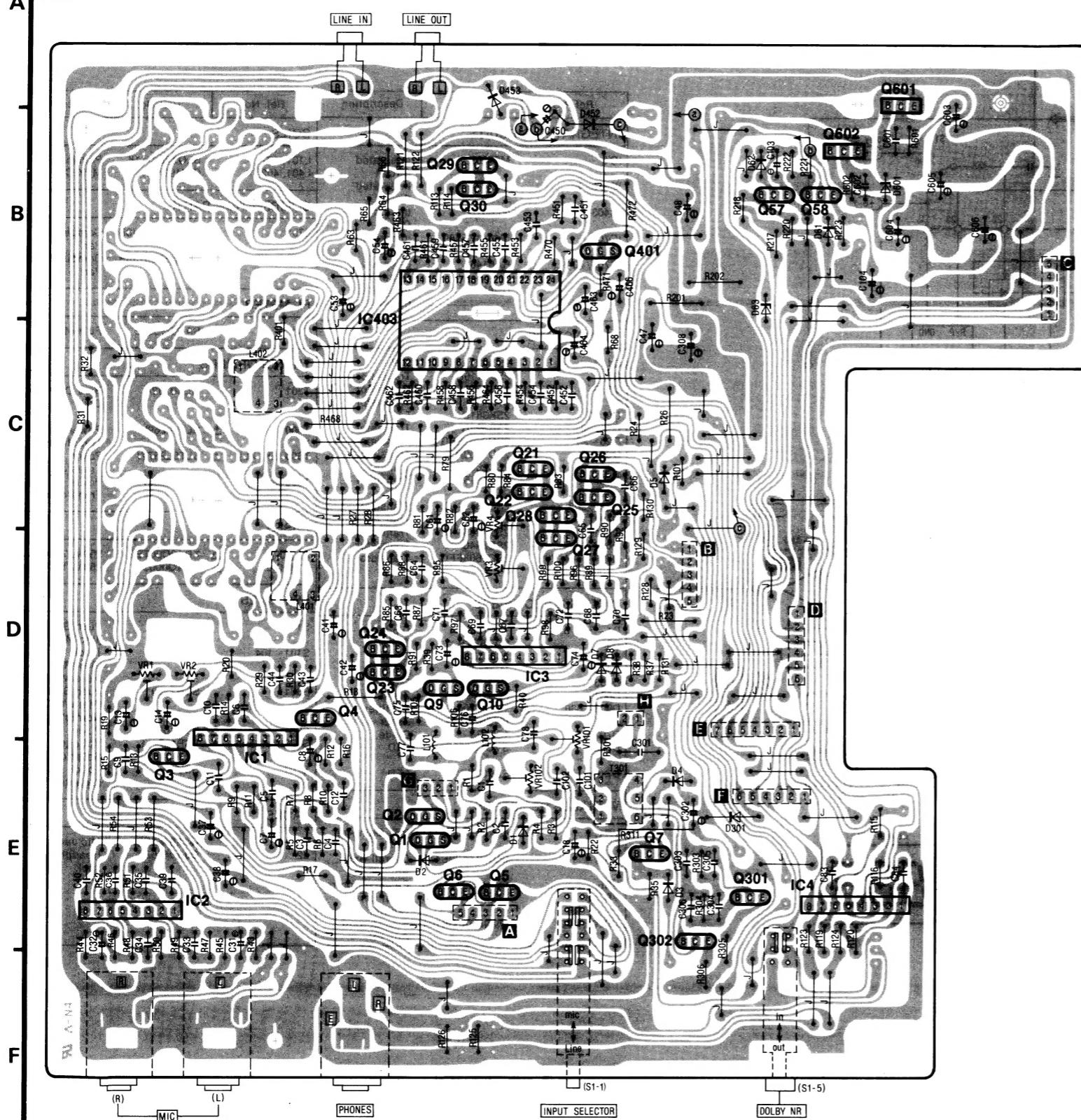


IV COUNTER P.C.B.

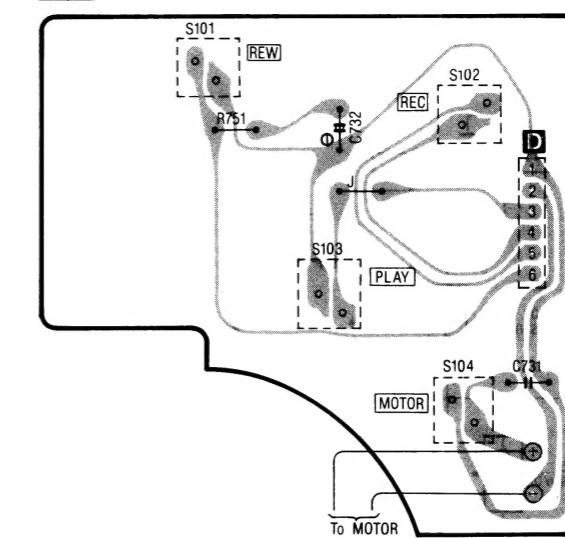


1 2 3 4 5 6 7 8 9

I MAIN P.C.B.



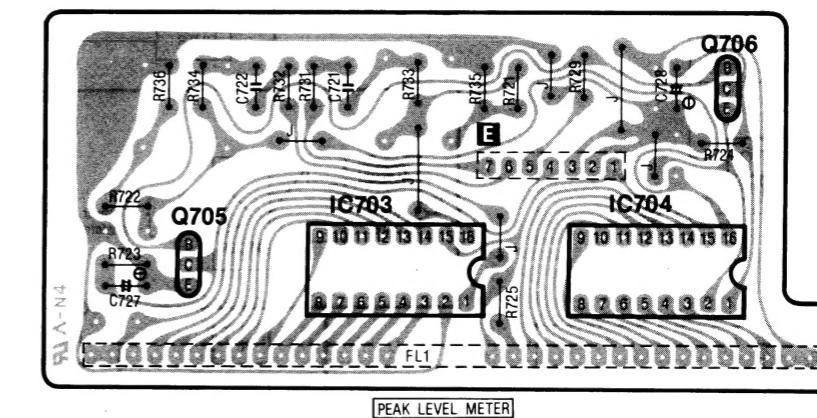
III MECHANISM P.C.B.



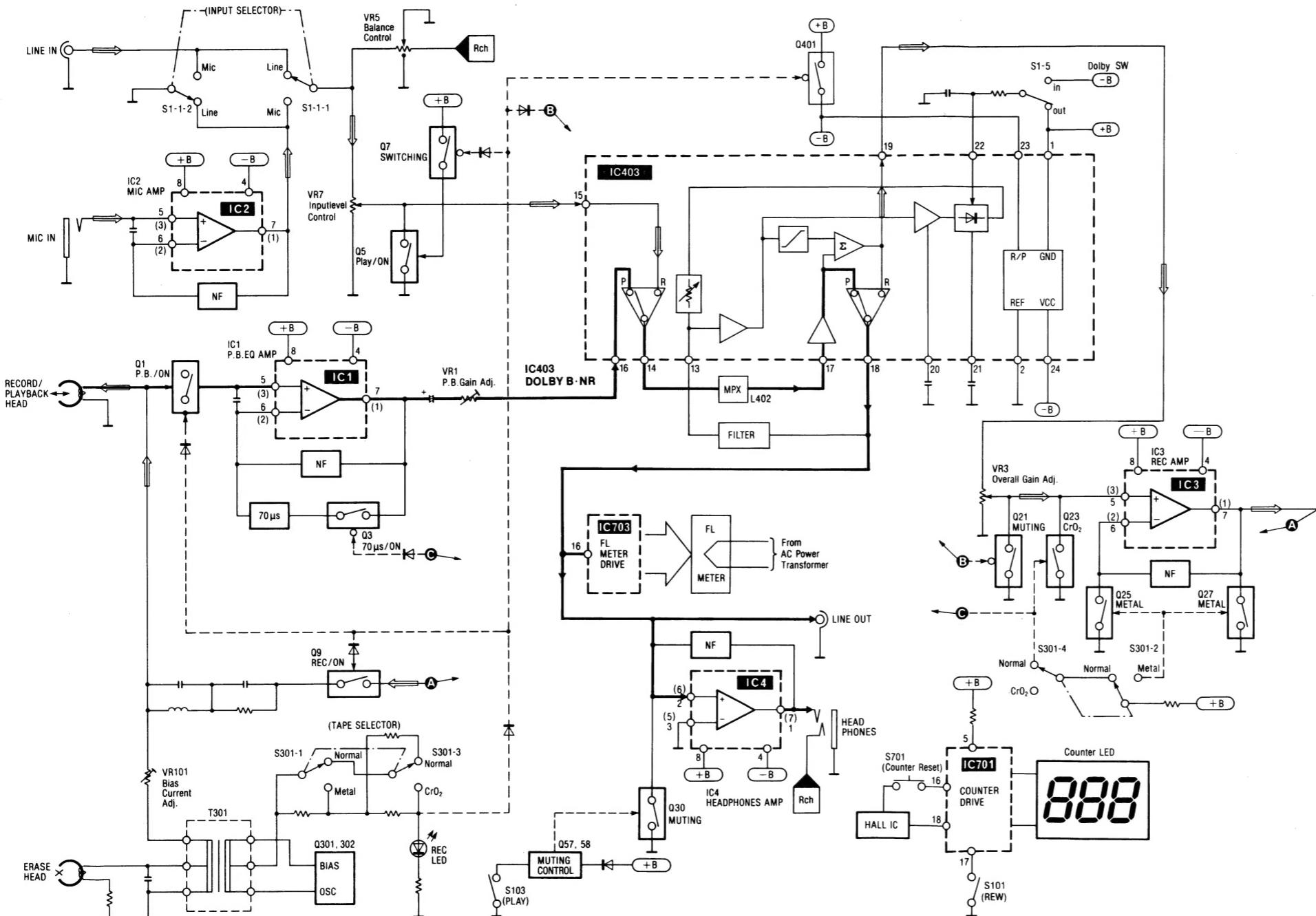
■ TERMINAL GUIDE OF TRANSISTORS, DIODES AND IC'S

NE657N	24 Pin
LM6417E589	22 Pin
BA6146	16 Pin
M5218L M5220L	DN6838-A
2SA1115E	2SB894Q
2SD1265-O	UN4113
2SB744R	2SJ40D, 2SK381D 2SC2603EFG
1SS133 1SR35200A 1S2473	MTZ5R6BT77 MTZ8R2B MTZ20BT77
SLV31VC3	2SC3311 2SD1450R

V PEAK LEVEL METER P.C.B.



■ BLOCK DIAGRAM



■ ELECTRICAL PARTS LIST

Notes:

1. Part numbers are indicated on most mechanical parts.
Please use this part number for parts order.
2. Important safety notice:
Components identified by Δ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.
3. Bracketed indications in Ref. No. columns specify the area.
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
INTEGRATED CIRCUITS			COILS		
IC1	M5220L	Integrated Circuit	L101, 102	SLQX303-1K	Peaking Coil
IC2, 3, 4	M5218L	Integrated Circuit	L401, 402	QLM9Z10K	MPX Coil
IC403	NE657N	Integrated Circuit			
IC701	LM6417E589	Integrated Circuit			
IC703, 704	BA6146	Integrated Circuit			
IC707	DN6838-A	Integrated Circuit			
TRANSISTORS			COMBINATION PARTS		
Q1, 2	2SJ40D	FET	Z701	EXBF9E822J8R	Combination Part
Q3, 4	2SA1115E	Transistor	Z702	EXBF8E561J4R	Combination Part
Q5, 6	2SC2603EFG	Transistor			
Q7	UN4113	Transistor			
Q9, 10	2SK381D	FET			
Q21, 22	2SB894R	Transistor			
Q23-28	2SC2603EFG	Transistor			
Q29, 30	2SD1450R	Transistor			
Q57	2SC2603EFG	Transistor			
Q58	2SA1115E	Transistor			
Q301, 302	2SC3311-Q	Transistor			
Q401	2SJ40D	Transistor			
Q601	2SD1265-0	Transistor			
Q602	2SB744Q	Transistor			
Q701-704, 705, 706	2SC2603EFG	Transistor			
DIODES & RECTIFIERS			TRANSFORMERS		
D1-5, 7, 8, 61, 62	1SS133	Diode	T301	QLB0202K	Bias Oscillation Coil
D63	MTZ8R2B	Zener			
D301	1S2473	Diode			
D452	1S2473	Diode			
D453	1SS133	Diode			
D601	MTZ20BT77	Zener			
D603-606	1SR35200	Rectifier			
D701	MTZ5R6BT77	Zener			
D702, 703	1SS133	Diode			
D705	SVGLB203DN1	LED			
D710	SLV31VC3	LED			
VARIABLE RESISTORS			FUSES		
VR1, 2	QVN3A00B223	P.B. Gain Adj.	F1 [EK]	△ XBA2C05TB0	250V, T500mA
VR3, 4	QVN3A00B473	VR	F1 [other]	△ XBAQ0003	250V, T500mA
VR5	EWHFDAF15G25	Overall Gain Adj. VR			
VR7, 8	EWC5SA000A54	Balance Control			
VR101, 102	QVN3A00B104	Input Level Control			
		Bias Current Adj. VR			
JACKS			SWITCHES		
			S1	SSH3701	Push Switch (Inc/Mic)
			S101-104	SSP83	Tutch Switch (Rew/Rec/Mute/Motor)
			S301	SSH2109	Push Switch (Metal/CrO ₂ /Normal)
			S601	△ SSH1069	Power Switch
			S602 [XA] only	△ SSR187-1	Voltage Selector
			S701	SSG13	Touch Switch (Counter Reset)

■ SCHEMATIC DIAGRAM

Notes:
(This schematic diagram may be modified at any time with the development of new technology.)

* This is the basic circuit diagram of this unit.
Note that part of the circuit is subject to change depending on the

- S1-1-1~S1-1-4: Input selector switch in "line" position.
- S1-5: Noise reduction switch in "OUT" position.
- S101: REW switch in "OFF" position.
- S102: REC switch in "OFF" position.
- S103: MUTE switch in "OFF" position.
- S104: Motor switch in "OFF" position.
- S301: Tape selector switch in "TYPE I /Normal" position.
(TYPE IV/Metal \leftrightarrow TYPE III/CrO₂ \leftrightarrow TYPE I /Normal)
- S601: Power switch in "ON" position.
- S602: Voltage selector in "240V" position.
(IXA only)

- S701: Counter reset switch.
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
1K=1,000(Ω), 1M=1,000k(Ω)
- Capacity are in micro-farads (μ F) unless specified otherwise.

- All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.
- (—) Voltage values at record mode.
- CrO₂ Voltage values at CrO₂ tape mode.
- Metal Voltage values at Metal tape mode.
- B Voltage values at Dolby B NR mode.

For measurement use EVM.

- (—) indicates B (bias).
- (—) indicates the flow of the playback signal.
- (—) indicates the flow of the record signal.

* Important safety notice:

Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

* Caution!

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

* Cover the parts boxes made of plastics with aluminum foil.

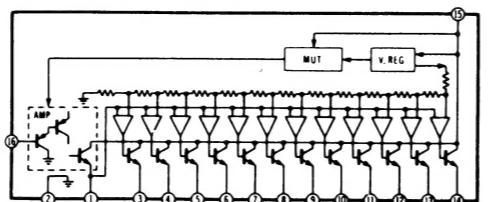
* Ground the soldering iron.

* Put a conductive mat on the work table.

* Do not touch the legs of IC or LSI with the fingers directly.

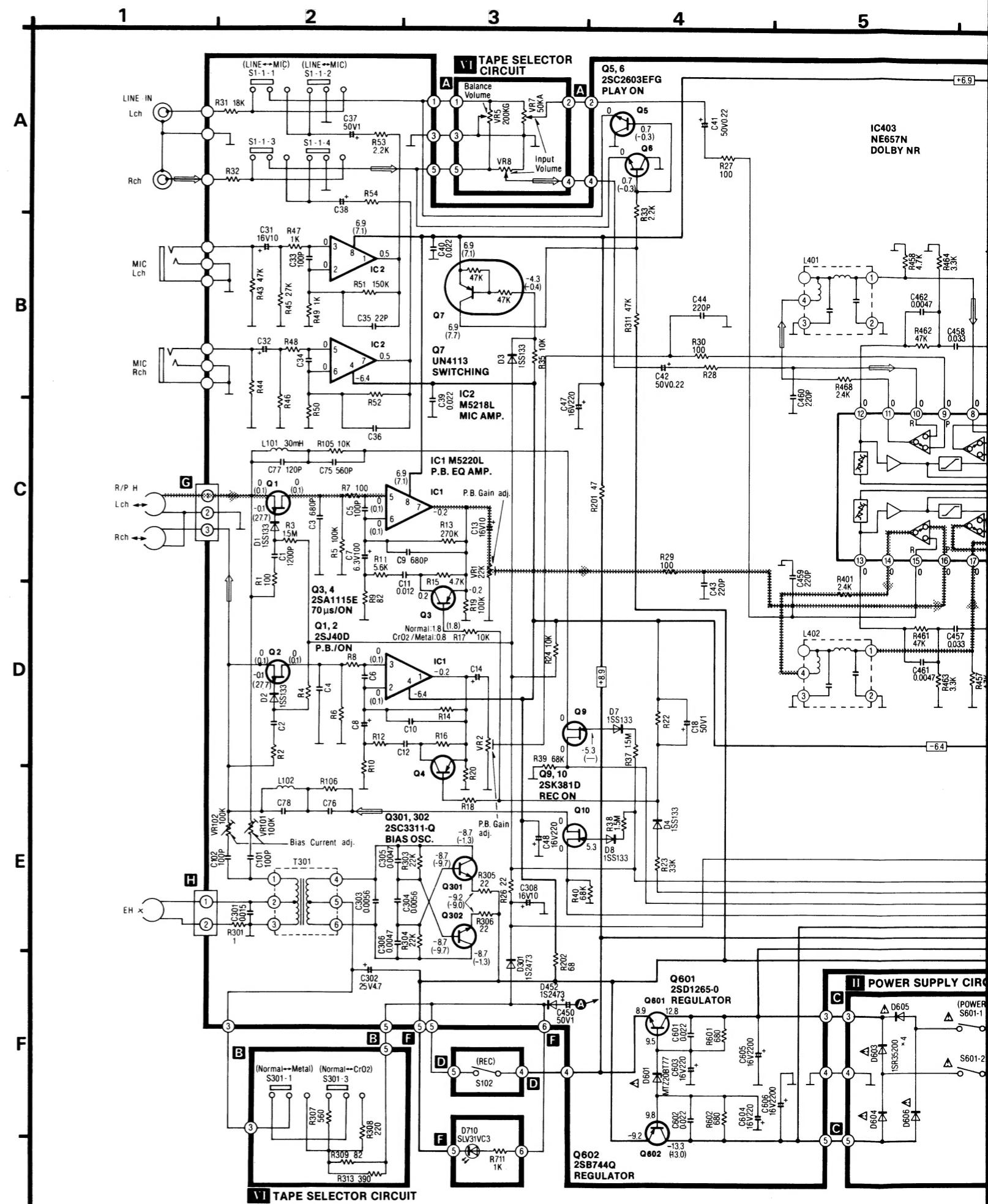
■ EQUIVALENT CIRCUIT

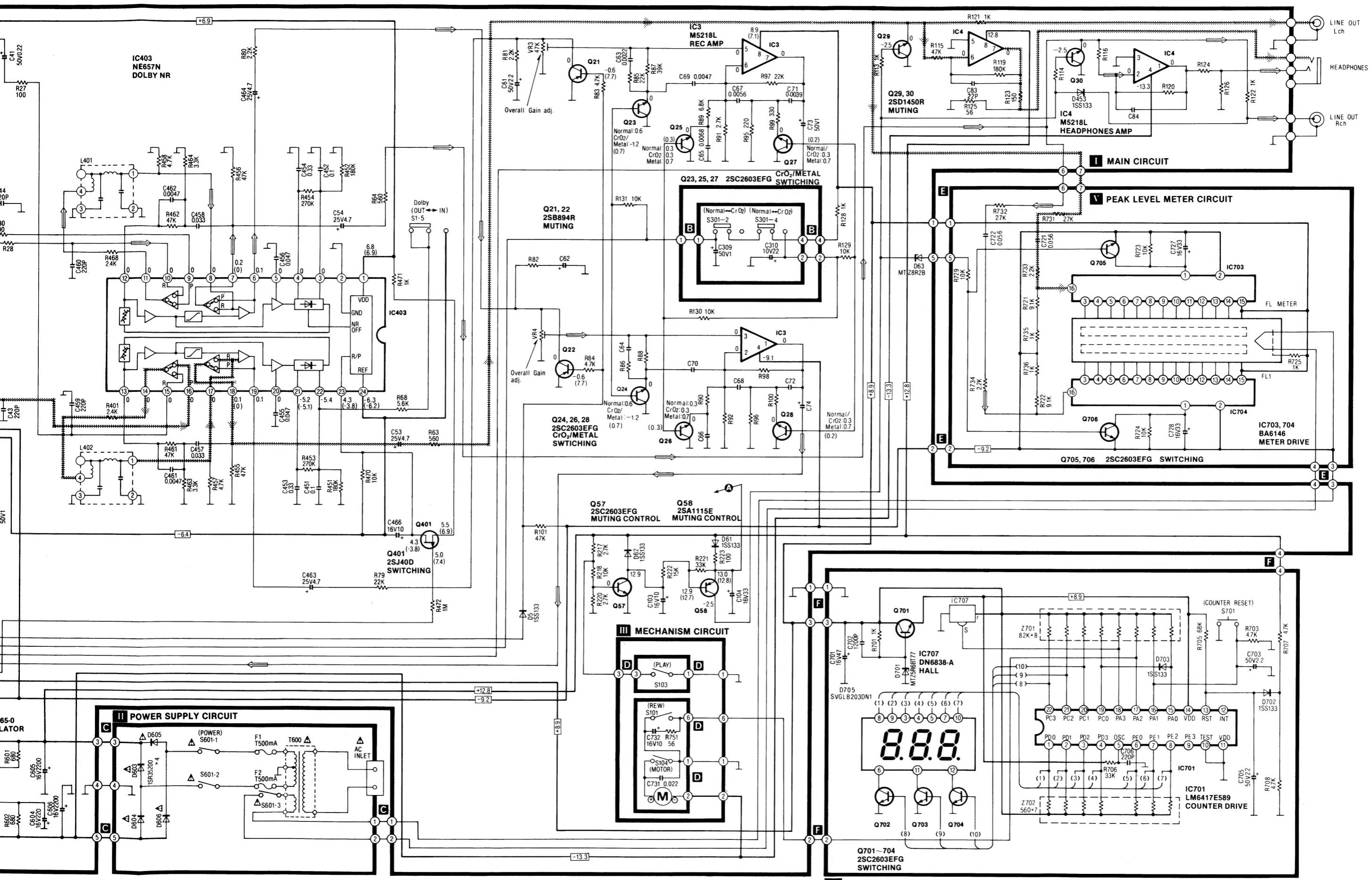
IC703, 704: BA6146



SPECIFICATIONS * Input level control ... MAX

Playback S/N ratio * Test tape...QZZCFM	Greater than 45dB
Overall distortion * Test tape	Normal..... ...QZZCRA for Normal ...QZZCRX for CrO ₂ ...QZZCRZ for Metal
Overall S/N ratio * Test tape...QZZCRA	Greater than 43dB (without NAB filter)



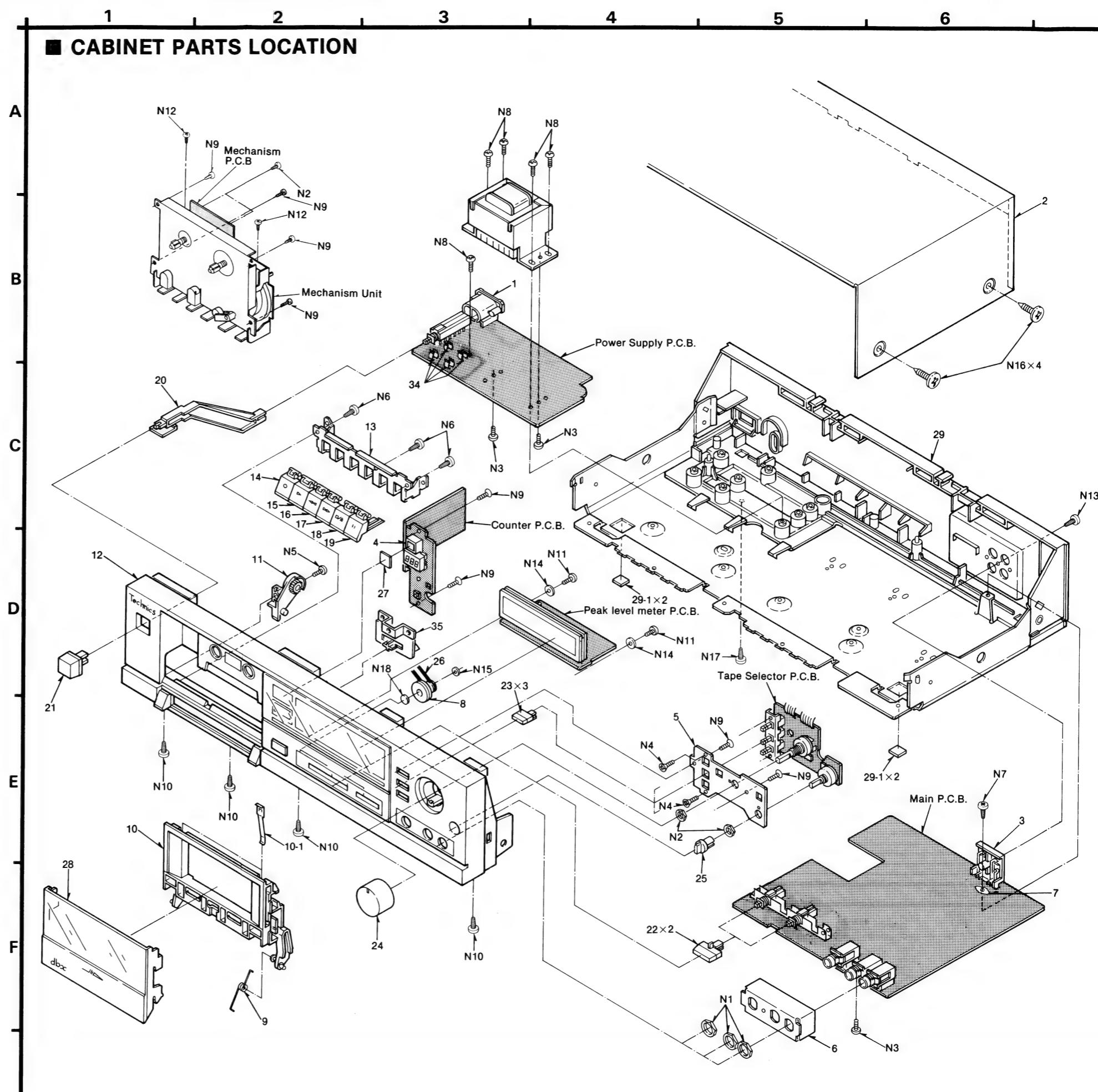


• REPLACEMENT PARTS LIST

Notes: • Part numbers are indicated on most mechanical parts.
Please use this part number for parts order.
• Important safety notice:
Components identified by Δ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.
• Bracketed indications in Ref. No. columns specify the area.
Parts without these indications can be used for all areas.
• \otimes -marked parts are used for black only, while \circ -marked parts are for silver type only.
• Part other than \otimes - and \circ -marked are used for both black and silver type.
• The parenthesized numbers in the column of description stand for the quantity per set.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
CABINET and CHASSIS PARTS					
1 [XL] Δ	SJS9237	AC Inlet	31	SJT30643-V	6 Pin Connector (1)
1 [other] Δ	SJS9236	AC Inlet	32	QJP1920TN	2 Pin Plug (1)
2	\circ SKC1920S98	Case Cover	32	QJP1921TN	3 Pin Plug (1)
2	\otimes SKC1920K99	Case Cover	33	QJS1920TN	2 Pin Socket (1)
3	SJF3057N	Terminal Plate	33	QJS1921TN	3 Pin Socket (1)
4	SMPM11	LED Holder	34	QTF1054	Fuse Holder (4)
5	SMN2000	Volume Angle	35	\circ SBC798-1	Button (1)
6	QMA4779	MIC Angel	35	\otimes SBC798	Button (1)
7	SNE55	Earth Plate			
8	SXDM24	Counter Pulley Ass'y			
9	SUS797-1	Holder Spring			
10	SGXSD225W-KM	Cassette Holder Ass'y			
[10-1]	[QBP2006A]	Tape Pressure Spring			
11	SGXSD250-SE	Damper Gear Ass'y			
12	\circ SGYSB106-SE	Front Panel Ass'y			
12	\otimes SGYSB106-KE	Front Panel Ass'y			
13	SMN2001-1	Button Angle			
14	\circ SBC801A-1	Rec Button			
14	\otimes SBC801A	Rec Button			
15	\circ SBC802A-1	Play Button			
15	\otimes SBC802A	Play Button			
16	\circ SBC803A-1	Rew Button			
16	\otimes SBC803A	Rew Button			
17	\circ SBC804A-1	ff Button			
17	\otimes SBC804A	ff Button			
18	\circ SBC805A-1	Stop Button			
18	\otimes SBC805A	Stop Button			
19	\circ SBC806A-1	Pause Button			
19	\otimes SBC806A	Pause Button			
20	SUB255	Power Rod			
21	\circ SBC666	Power Button			
21	\otimes SBC666-3	Power Button			
22	\circ SBC723-4	Push Button			
22	\otimes SBC723-1	Push Button			
23	\circ SBC799-1	Select Button			
23	\otimes SBC799	Select Button			
24	\circ SBN1204-1	Input Volume Knob			
24	\otimes SBN1204	Input Volume Knob			
25	\circ SBN1205-1	Balance Volume Knob			
25	\otimes SBN1205	Balance Volume Knob			
26	QDB0143-2	Counter Belt			
27	SHRM6	Sheet			
28	\circ SYKM30	Cassette Lid Ass'y			
28	\otimes SYKM31	Cassette Lid Ass'y			
29 [E]	SKMSB106-KE	Main Case Ass'y			
29 [EK]	SKMSB106-KK	Main Case Ass'y			
29 [XA]	SKMSB106-KA	Main Case Ass'y			
29 [XL]	SKMSB106-KL	Main Case Ass'y			
29 [other]	SKMSB106-KG	Main Case Ass'y			
[29-1]	[SKL293]	Case Foot			
30	QJT1054	Contact			
31	SJT30543-V	5 Pin Connector			

■ CABINET PARTS LOCATION



■ MECHANICAL PARTS LOCATION

NOTES:

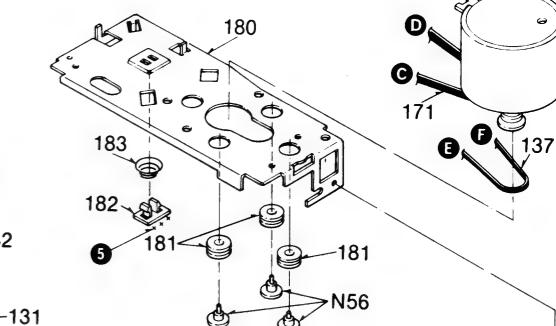
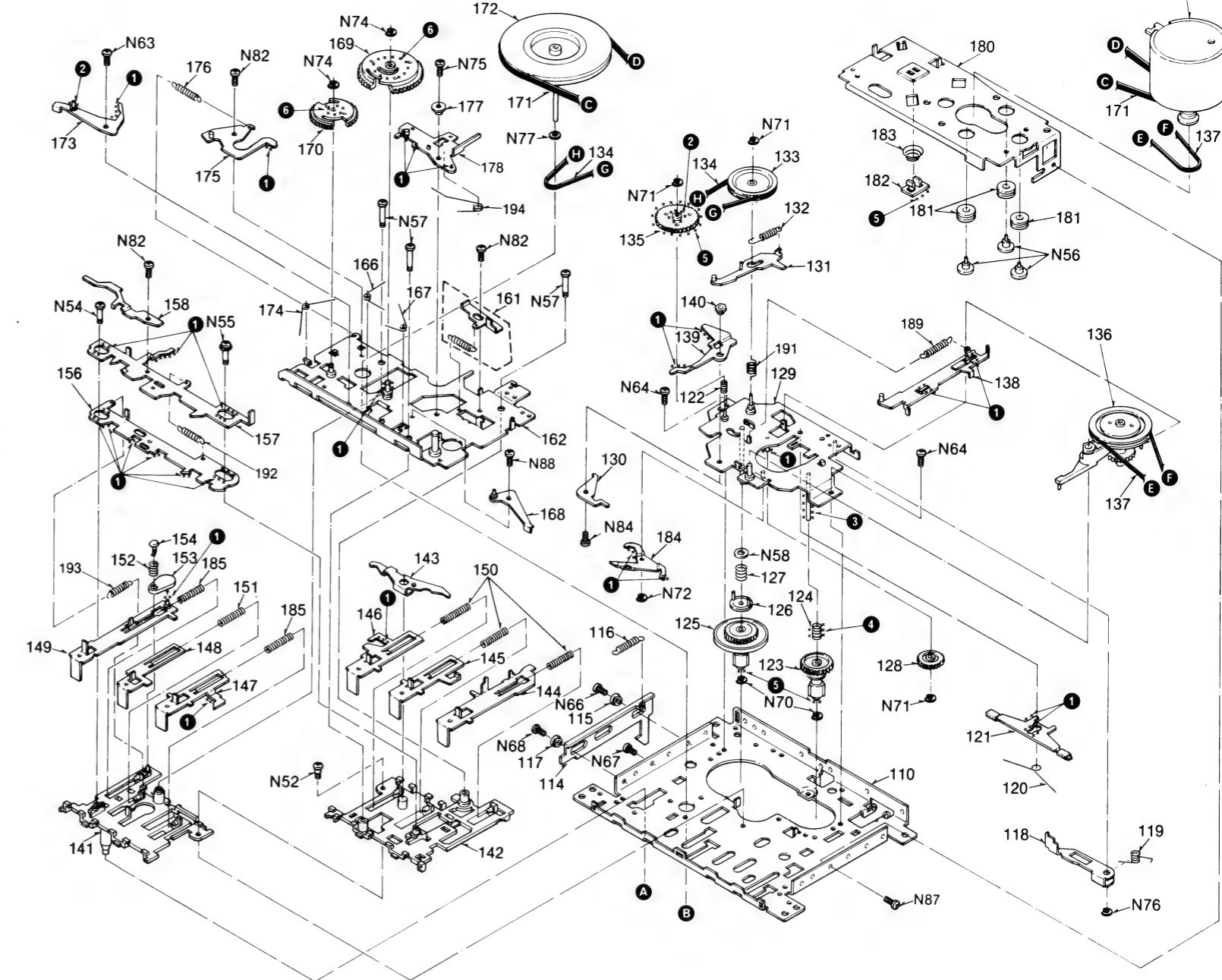
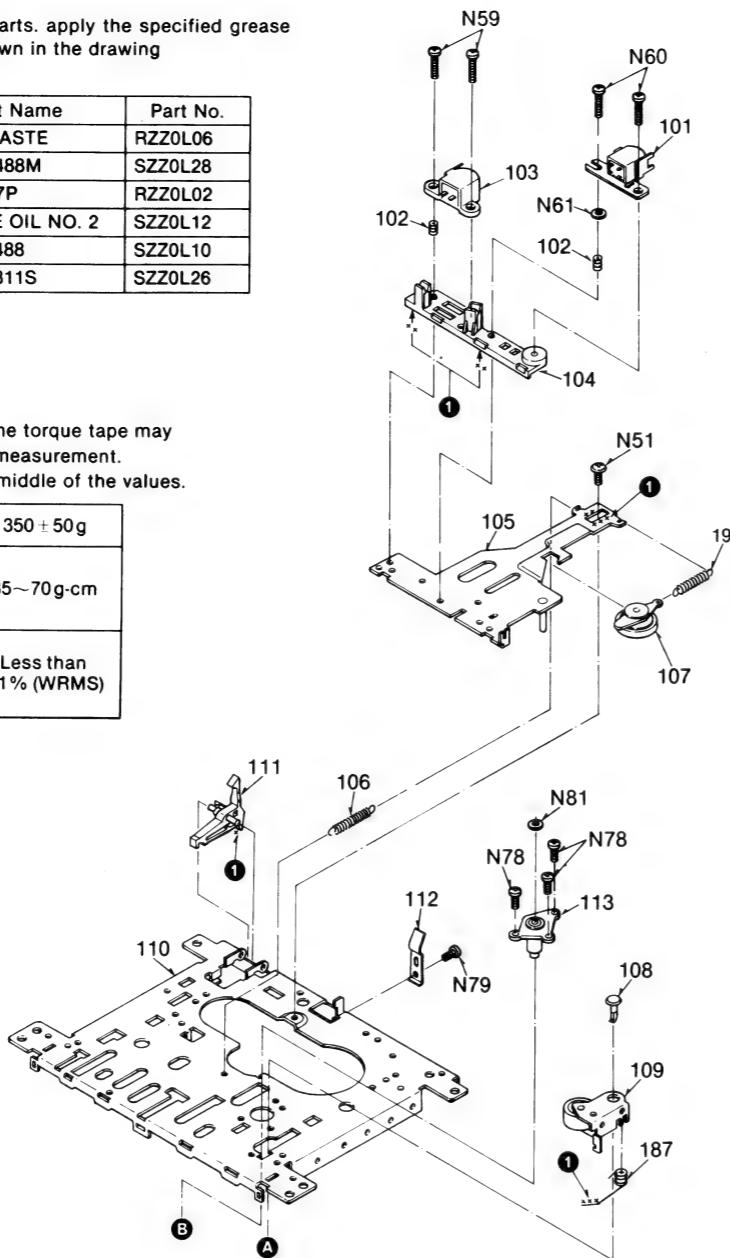
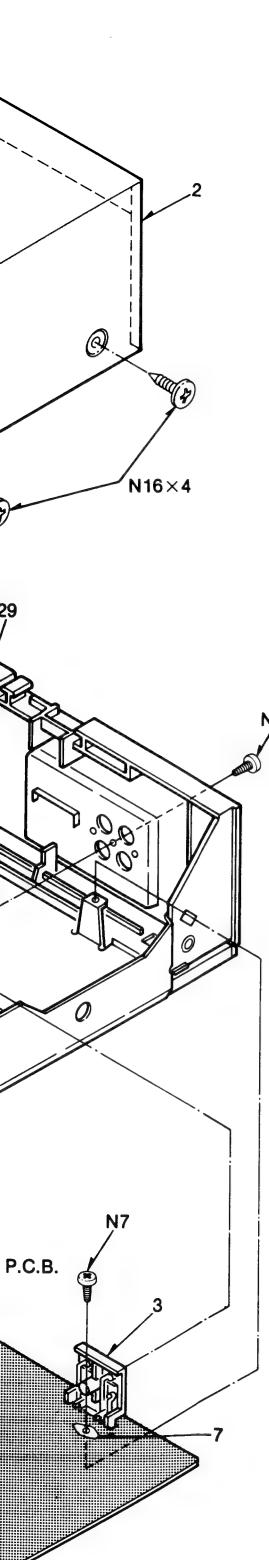
- When changing mechanism parts, apply the specified grease to the areas marked "x x" shown in the drawing "Mechanical Parts Location".

Ref. No.	Part Name	Part No.
①	ROCOL PASTE	RZZ0L06
②	FLOIL G-488M	SZZ0L28
③	FLOIL 947P	RZZ0L02
④	SILICONE OIL NO. 2	SZZ0L12
⑤	FLOIL G-488	SZZ0L10
⑥	FLOIL G-311S	SZZ0L26

SPECIFICATIONS

NOTE: The value indicated by the torque tape may fluctuate during torque measurement. In that case, obtain the middle of the values.

Pressure of pressure roller	350 ± 50g
Takeup tension * Use cassette torque meter QZZSRKCT	35~70g·cm
Wow and flutter; (JIS) * Use test tape QZZCWAT	Less than 0.1% (WRMS)



REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description			
MECHANISM PARTS			118	SMQ4790	Control Lever (1)	139	SMQ4834	Auto Lever (1)	161	SMQ4880	REC Function Lever (1)	183	SMQ4922	Damper Spring (1)	N60	SMQT1634	Screw $\oplus 2 \times 7$ (2)			
101	QWY4165G	R.P Head (1)	119	RFS379Z	Control Lever Spring (1)	140	SMQ4938	Auto Lever Collar (1)	162	SMQT1590	Sub Chassis Ass'y (1)	184	SMQ4940	Kick Lever (1)	N61	XWG2	Washer 2φ (1)			
102	SMQ4596	Head Spring (2)	120	SMQ4792	Spring (1)	141	SMQ4836	Button Base (L) (1)	166	SMQ4888	Main Gear Spring (1)	185	SMQ4858	Button Lever Spring (2)	N63	SMQT1582	Collar Screw (1)			
103	QWY2138G	E Head (1)	121	SMQ4794	Brake Arm Ass'y (1)	142	SMQ4840	Button Base (R) (1)	167	SMQ4890	M. Trigger Arm (1)	189	RFS378Z	RF Slide Lever Spring (1)	N64	XYN2+C4	Screw $\oplus 2 \times 4$ (2)			
104	SMQ4768	Head Base (1)	122	SMQT1630	Cam Gear Spring (1)	143	SMQT1585	REC. Stopper (1)	168	SMQ4892	M. Trigger Arm Ass'y (1)	190	RFS249Z	Spring (1)	N66	XYN2+C5	Screw $\oplus 2 \times 5$ (1)			
105	RFD135Z	Head Panel Ass'y (1)	123	SMQ4800	Supply Reel Ass'y (1)	144	SMQT1586	REC. Button Lever (1)	169	SMQ4894	Main Gear (1)	191	SMQT1631	RF Clutch Arm (1)	N68	XSN2+6	Screw $\oplus 2 \times 6$ (1)			
106	SMQ4770	Head Panel Spring (1)	124	SMQT1636	Back Timing Spring (1)	145	SMQ4846	Play Button Lever (1)	170	SMQ4896	P Gear (1)	192	RFS253Z	Spring (1)	N70	RFE133Z	E-Ring 1.5φ Special (2)			
107	SMQ4772	Take Up Roller (1)	125	SMQ4804	Take Up Reel Ass'y (1)	146	SMQ4848	RWD Button Lever (1)	171	SMQT1591	Main Belt (1)	193	SMQT1588	Spring (1)	N71	SMQ4930	Polyslider Washer (3)			
		Shaft Ass'y	126	SMQ4806	Sensing Piece (1)	147	SMQ4850	FF Button Lever (1)	172	SMQT1592	Flywheel Ass'y (1)	194	RFS248Z	Spring (1)	N72	XUC12FT	E-Ring 1.2φ (1)			
108	SMQ4774	Function Lever (1)	127	SMQ4808	Sensing Piece Spring (1)	148	SMQ4852	Stop Button Lever (1)	173	SMQ4902	P. Trigger Arm Ass'y (1)				N74	XUC2FT	E-Ring 2.0φ (2)			
		Stopper	128	SMQ4810	FF. Gear (1)	149	SMQ4854	Pause Button Lever (1)	174	SMQ4904	P. Trigger Arm Spring (1)				N75	XYN26+C6	Screw $\oplus 2.6 \times 6$ (1)			
109	SMQ4776-1	Pinch Roller Arm (1)	129	RFU16Z	Reel Base Ass'y (1)	150	SMQ4856	Button Lever Spring (3)	175	SMQ4906	Pause Arm Ass'y (1)				SCREWS and NUTS					
		Ass'y	130	SMQ4814	T. Roller Kick Lever (1)				176	SMQ4909	Pause Arm Spring (1)				N76	XUC15FT	E-Ring 1.5φ (1)			
110	SMQT1458	Chassis (1)				151	SMQ4858	Button Lever Spring (1)	177	SMQ4910	Lift Arm Collar (1)	N51	SMQT1581	Collar Screw (1)	N77	SMQ4932	Polyslider Washer (1)			
			131	SMQ4818	Sensing Lever (1)	152	SMQ4860	Pause Lever Spring (1)	178	SMQT1593	Lift Arm Ass'y (1)	N52	SMQ4838	Collar Screw (1)	N78	SMQ4934	Screw $\oplus 2 \times 3$ (3)			
111	SMQ4778	REC Safety Lever (1)	132	SMQ4820	Sensing Lever Spring (1)	153	SMQ2444	Pause Lever (1)	179	SMQT1594	Motor Ass'y (1)	N54	SMQ4870	Collar Screw (1)	N79	XTN26+3	Screw $\oplus 2.6 \times 3$ (1)			
112	SMQ4780	Pack Hold Spring (1)	133	SMQ4822	Pully (1)	154	SMQ4862	Stopper (1)	180	SMQT1633	FM Hold Plate (1)	N55	SMQ4878	Collar Screw (1)	N81	SMQ4936	Nylon Washer (1)			
113	SMQ4782	Flywheel Metal (1)	134	SMQ4824	Full Auto Belt (1)	156	SMQT1587	Push Button (1)	181	SMQ4916	Motor Rubber (3)	N56	SMQ4918	Collar Screw (3)			2×5×0.5			
114	RFY183Z	Eject Slider Lever (1)	135	SMQ4826	Cam Gear (1)				182	SMQT1634	Polyslider Washer (1)	N82	SMQ1582	Collar Screw (3)						
115	SMQ4786	Collar (1)	136	SMQT1583	RF Clutch Arm Ass'y (1)	157	SMQT1589	Switch Function (1)	183	SMQ4942	Collar Screw (3)	N84	SMQ4944	Collar Screw (1)						
116	SMQT1629	E.H. Base Spring (1)	137	SMQT1584	RF Belt (1)				184	SMQ4916	Motor Rubber (3)	N88	XYN2+C5	Screw $\oplus 2 \times 5$ (2)						
117	SMQ4788	Collar (1)	138	SMQT1632	RF Slide Lever Ass'y (1)	158	SMQ4872	E Kick Lever (1)	185	SMQT1595	Flywheel Patch Plate (1)	N89	XSN2+8	Screw $\oplus 2 \times 8$ (2)	N88	SMQ4168	Collar Screw (1)			

Dolby NR-Equipped Stereo Cassette Deck

RS-B106

DEUTSCH

■ MESSUNGEN UND EINSTELL METHODEN

Meßinstrumente

- Elektronisches Voltmeter (EVM)
- Oszilloskop
- Digitaler Frequenzmesser
- Audiofrequenz-Oszillatator
- Dämpfungswiderstand
- Gleichstrom-Voltmeter
- Widerstand (600Ω)

Kopfazimut-Justierung

1. Die Anschlußverbindungen für die Testgeräte sind in Abb. 1 gezeigt.
2. Den Azimut-Justierungsteil (8kHz, -20dB) des Testbandes (QZZCFM) wiedergeben und die Winkeljustierungs-Einstellschraube so verstellen, daß der Ausgang vom linken und rechten Kanal maximal wird. (Wenn die Justierpositionen für den linken und rechten Kanal verschieden sind, ist eine Position zu finden, wo der Ausgang des linken und rechten Kanals ausgelichen ist, und dann ist die Justierung durchzuführen.)
3. Gleichzeitig eine Lissajous-Wellenform ziehen und Phasenablenkung eliminieren.
4. Nach erfolgter Justierung sind die Bandführungs-Höhen-und-Winkeljustierschrauben zu sichern.

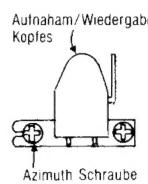


Abb. 2

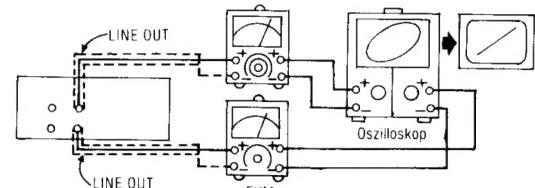


Abb. 1

Bandgeschwindigkeits-Justierung

1. Der Testaufbau ist in Abb. 3 gezeigt.
2. Den mittleren Teil des Testbandes (QZZCWAT) wiedergeben.
3. Den Drehwiderstand im Motor so justieren, daß die Ausgangsleistung dem Standard-Wert entspricht.

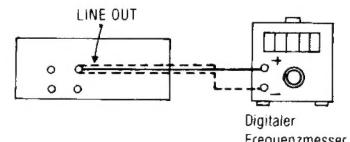
Standard-Wert: 3000 ± 10 Hz

Abb. 3

Wiedergabe-Frequenzgang

1. Der Testaufbau ist in Abb. 4 gezeigt.
2. Den Wiedergabe-Frequenzgangteil (315Hz, 12,5kHz~63Hz, -20dB) des Testbandes (QZZCFM) wiedergeben.
3. Überprüfen, ob der Frequenzgang innerhalb des in Abb. 5 für den linken und rechten Kanal gezeigten Bereichs liegt.

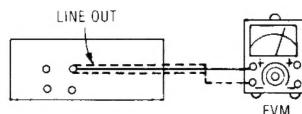


Abb. 4

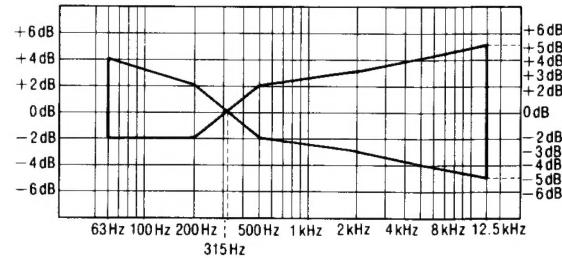


Abb. 5

Justierung des Wiedergabe-Verstärkungsgrades

1. Der Testaufbau ist in Abb. 4 gezeigt.
2. Den für den Wiedergabe-Verstärkungsgrad justierten Teil (315Hz, 0dB) des Testbandes (QZZCFM) wiedergeben.
3. Den Drehwiderstand 1, (linker Kanal) (Drehwiderstand 2 (rechter Kanal)) so justieren, daß die Ausgangsleistung dem Standard-Wert entspricht.

Standard-Wert: $0,4V \pm 0,5dB (0,02V)$

Gesamtfrequenzgang

- Der Testaufbau ist in Abb. 6 gezeigt.
- Den Bandsorten-Wahlschalter in die "Normal"-Position einstellen.
- Eine Normalband-Leercassette (QZZCRA) einsetzen und aufnehmen, während ein Signal von nacheinander 50Hz, 100Hz, 200Hz, 500Hz, 1kHz, 4kHz, 8kHz und 10kHz bei 20dB, abgeschwächt vom Referenz-Eingangsspegsignal (1kHz, -24dB) eingegeben wird.
- Das in Schritt 2 aufgezeichnete Signal wiedergeben und prüfen, ob der Pegel jeder Ausgangsfrequenz im Bereich liegt, der in Abb. 7 im Vergleich zur Referenzfrequenz (1kHz) gezeigt wird.
- Falls er nicht im Standard-Bereich liegt, ist der Vormagnetisierungsstrom mit Drehwiderstand 101 (linker Kanal) (Drehwiderstand 102 (rechter Kanal)) so zu justieren, daß der Frequenzpegel innerhalb des Standards zu liegen kommt.
 - Erhöhter Pegel im Frequenzbereich Den Vormagnetisierungsstrom erhöhen.
 - Reduzierter Pegel im Frequenzbereich Den Vormagnetisierungsstrom senken.
- Anschließend das auf der CrO₂-Leerband-Cassette (QZZCRX) und der Reineisenband-Leercassette (QZZCRZ) aufgezeichnete Signal auf 12,5kHz erhöhen und auf gleiche Weise justieren, wie vorgehend beschrieben. Dann überprüfen, ob der Frequenzpegel innerhalb des in Abb. 8 gezeigten Bereichs liegt.

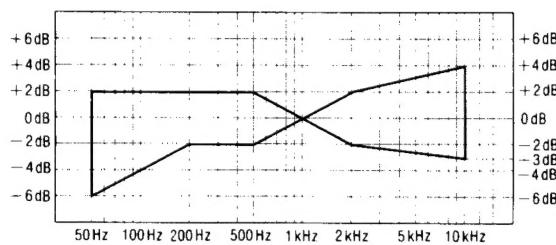


Abb. 7

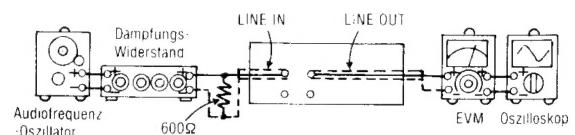


Abb. 6

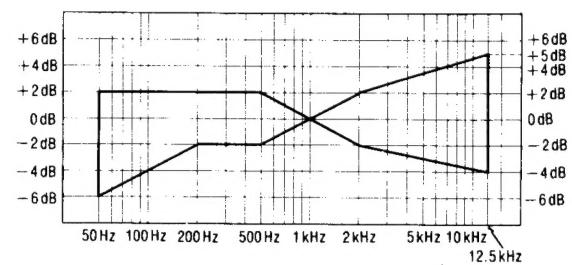


Abb. 8

Justierung des Gesamtverstärkungsgrades

- Der Testaufbau ist in Abb. 6 gezeigt.
- Den Bandsorten-Wahlschalter in die "Normal"-Position einstellen.
- Eine Normalband-Leercassette (QZZCRA) einsetzen und im Aufnahmepause-Zustand des Gerätes das Referenzsignal (1kHz, -24dB) eingegeben.
- Die Ausgangsleistung mit dem Dämpfungswiderstand auf 0,42V justieren und dann aufnehmen.
- Das in Schritt 3 aufgezeichnete Signal wiedergeben und überprüfen, ob die Ausgangsleistung dem Standard-Wert entspricht.
- Falls sie nicht dem Standard-Wert entspricht, ist der Drehwiderstand 3 (linker Kanal) (Drehwiderstand 4 (rechter Kanal)) zu justieren, und dann sind die Schritte (2), (3) und (4) zu wiederholen, bis die Ausgangsleistung dem Standard-Wert entspricht.

Standard-Wert: $0,4V \pm 0,05V$

Dolby-Rauschunterdrückungs-Schaltkreis

- Der Testaufbau ist in Abb. 9 gezeigt.
- Eine Normalband-Cassette einsetzen und im Aufnahmepause-Zustand des Gerätes ein 5kHz-Signal eingegeben.
- Mit dem Dämpfungswiderstand so justieren, daß die Ausgangsleistung zwischen Anschluß ⑥ (linker Kanal) (Anschluß ⑯ (rechter Kanal)) des IC403 und Masse 12,3mV beträgt.
- Den Rauschunterdrückungs-Schalter (NR) einschalten und prüfen, ob der Pegel wie vorgeschrieben gegenüber dem Pegel im rauschunterdrückungsfreien Zustand verändert wird.

Standard-Wert: $8 \pm 1,5dB$

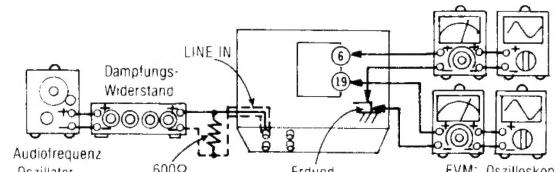


Abb. 9

FRANÇAIS

■ MÉTHODES DES MEASURES ET RÉGLAGES

Appareils de mesure

- Voltmètre électronique
- Oscilloscope
- Compteur de fréquence numérique
- Oscillateur de fréquence audio
- A.T.T. (Atténuateur)
- Voltmètre à C.C.
- Résistance (600Ω)

Réglage de l'angle des têtes de lecture

1. Le raccordement de l'équipement d'essai est montré à la Fig. 1.
2. Faire jouer la partie réglée azimutale (8kHz, -20dB) de la bande d'essai (QZZCFM) et régler la vis de mise au point azimutale de telle sorte que les puissances de sortie du canal de gauche et du canal de droite soient au maximum.
(Si les positions de réglage du canal de gauche et du canal de droite sont différentes, trouver une position où les puissances de sortie des canaux de gauche et de droite soient équilibrées, puis effectuer la mise au point.)
3. En même temps, établir une forme d'onde de Lissajous et éliminer la déviation de phase.
4. Après le réglage, bloquer les vis du réglage angulaire et de la hauteur des guides de bande.

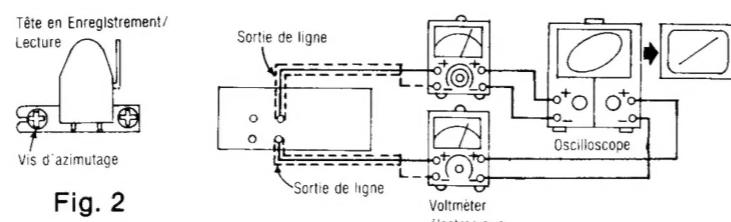


Fig. 2

Fig. 1

Réglage de la vitesse de défilement de la bande

1. Le raccordement de l'équipement d'essai est montré à la Fig. 3.
2. Faire jouer la partie centrale de la bande d'essai (QZZCWAT).
3. Régler VR dans le moteur de telle sorte que la puissance de sortie soit en deçà de la normale.

Valeur normalisée: $3000 \pm 10\text{Hz}$

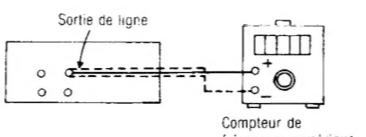


Fig. 3

Réponse en fréquence de la lecture

1. Le raccordement de l'équipement d'essai est montré à la Fig. 4.
2. Faire jouer la partie de la réponse en fréquence de la lecture (315Hz, 12,5kHz~63Hz, -20dB) de la bande d'essai (QZZCFM).
3. Vérifier que la fréquence soit en deçà de la plage montrée à la Fig. 5, à la fois pour le canal de gauche et le canal de droite.

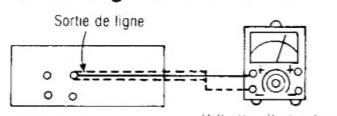


Fig. 4

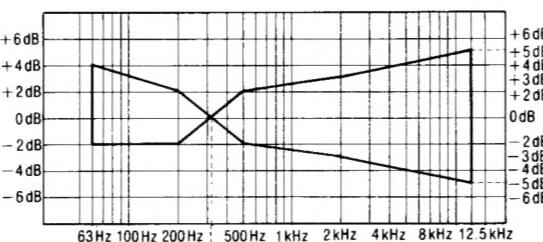


Fig. 5

Réglage d'amplification de la lecture

1. Le raccordement de l'équipement d'essai est montré à la Fig. 4.
2. Faire jouer la partie réglée d'amplification de la lecture (315Hz, 0dB) de la bande d'essai (QZZCFM).
3. Régler VR 1 (canal de gauche) [VR 2 (canal de droite)] de telle sorte que la puissance de sortie soit en deçà de la normale.

Valeur normalisée: $0,4 \pm 0,5\text{dB}$ (0,02V)

Réponse en fréquence globale

1. Le raccordement de l'équipement d'essai est montré à la Fig. 6.
2. Régler le commutateur sélecteur de bande sur la position normale.
3. Installer une bande vierge normale (QZZCRA) et enregistrer en appliquant un signal (50Hz, 100Hz, 200Hz, 500Hz, 1kHz, 4kHz, 8kHz et 10kHz) de 20dB atténueré provenant du signal du niveau d'entrée, de référence (1kHz, -24dB).
4. Faire jouer le signal enregistré à l'étape 2 et vérifier que le niveau de chaque fréquence de sortie soit en deçà de la plage montrée à la Fig. 7 en comparaison avec la fréquence de référence (1kHz).
5. S'il n'est pas en deçà de la plage standard, régler le courant de polarisation avec VR101 (canal de gauche) [VR102 (canal de droite)], de telle sorte que le niveau de fréquence soit en deçà de la normale.
 - Niveau vers la haut dans la plage de fréquence élevée.....Augmenter le courant de polarisation.
 - Niveau vers le bas dans la plage de fréquence élevée.....Diminuer le courant de polarisation.
6. Après cela, amplifier le signal enregistré sur la bande vierge CrO₂ (QZZCRX) et la bande vierge métallisée (QZZCRZ) jusqu'à 12,5kHz et régler de la même manière que celle mentionnée ci-dessus. Puis, vérifier que le niveau de fréquence soit en deçà de la plage montrée à la Fig. 8.

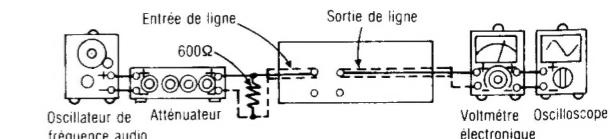


Fig. 6

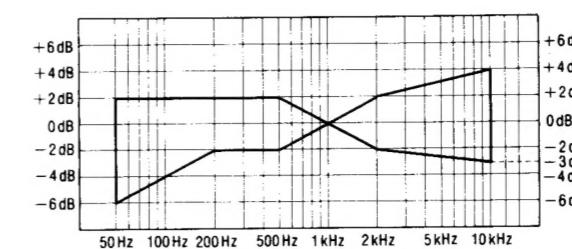


Fig. 7

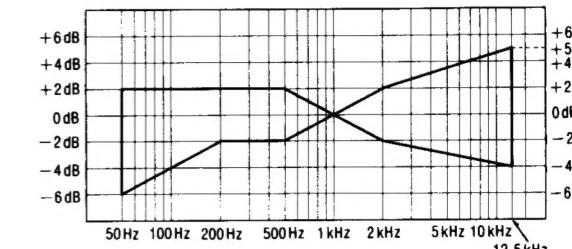


Fig. 8

Réglage d'amplification globale

1. Le raccordement de l'équipement d'essai est montré à la Fig. 6.
2. Régler le commutateur sélecteur de bande sur la position normale.
3. Installer une bande vierge normale (QZZCRA) et appliquer le signal de niveau d'entrée de référence (1kHz, -24dB) sur le mode d'intermission d'enregistrement.
4. Régler la puissance de sortie 0,42V avec l'atténuateur, puis enregistrer.
5. Faire jouer le signal enregistré à l'étape 3 et vérifier que la puissance de sortie soit en deçà de la normale.
6. Si elle n'est pas en deçà de la normale, régler VR3 (canal de gauche) [VR4 (canal de droite)] et répéter les étapes (2), (3) et (4) jusqu'à ce que la puissance de sortie soit en deçà de la normale.

Valeur normalisée: $0,4 \pm 0,05\text{V}$

Circuit de réduction des bruits Dolby

1. Le raccordement de l'équipement d'essai est montré à la Fig. 9.
2. Installer une bande normale et appliquer un signal de 5kHz sur le mode d'intermission d'enregistrement.
3. Régler avec l'atténuateur de telle sorte que la puissance de sortie entre la borne ⑥ (canal de gauche) [borne ⑯ (canal de droite)] de IC403 et la masse soit de 12,3mV.
4. Mettre en marche le commutateur de réduction des bruits et vérifier que le niveau change tel qu'il est spécifié à partir du niveau d'entrée sur le mode de sortie de réduction des bruits.

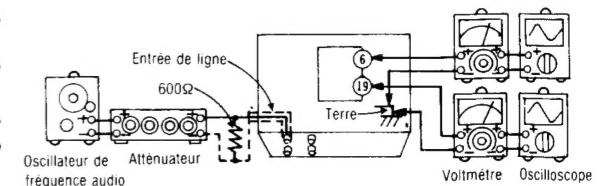


Fig. 9

Valeur normalisée: $8 \pm 1,5\text{dB}$

ESPAÑOL

■ METODOS DE AJUSTE Y MEDIDA

Instrumento de medición

- EVM (Voltímetro electrónico)
- Osciloscopio
- Frecuencímetro digital
- Oscilador AF

- ATT (Atenuador)
- Voltímetro CC
- Resistor (600Ω)

Ajuste acimutal de cabeza

1. La conexión del equipo de prueba se muestra en la Fig. 1.
2. Reproducir la parte ajustada de acimut (8kHz, -20dB) de la cinta de prueba (QZZCFM) y regular el tornillo de ajuste de ángulo de manera que las salidas de CH-I y CH-D sean maximizadas.
(Cuando las posiciones de ajuste sean diferentes de CH-I y CH-D, encontrar una posición donde las salidas de CH-I y CH-D estén equilibradas y, luego, hacer el ajuste.)
3. Al mismo tiempo, trazar una forma de onda de Lissajous y eliminar la deflexión de fase.
4. Despues del ajuste, fije los tornillos de ajuste de altura y ángulo de guía de cinta.

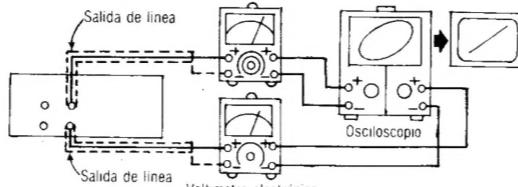
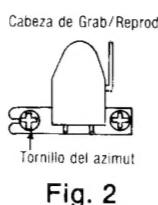


Fig. 2

Fig. 1

Ajuste de velocidad de cinta

1. La conexión del equipo de prueba se muestra en la Fig. 3.
2. Reproducir la parte media de la cinta de prueba (QZZCWAT).
3. Ajustar el RV del motor de manera que la salida esté dentro de la estandar.

Valor estandar: $3000 \pm 10\text{Hz}$

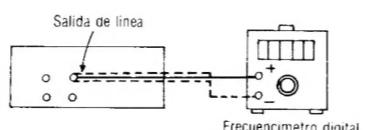


Fig. 3

Respuesta de frecuencia de reproducción

1. La conexión del equipo de prueba se muestra en la Fig. 4.
2. Reproducir la parte de respuesta de frecuencia de reproducción (315Hz, 12,5kHz — 63Hz, -20dB) de la cinta de prueba (QZZCFM).
3. Comprobar que la frecuencia esté dentro de la gama mostrada en la Fig. 5 tanto para CH-I como para CH-D.

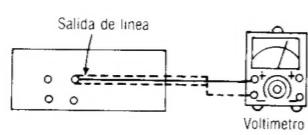


Fig. 4

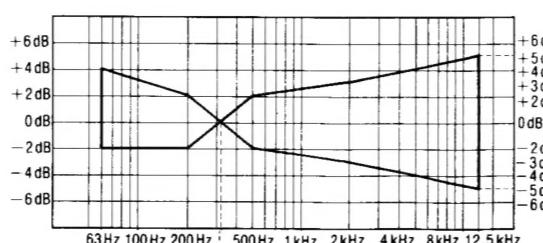


Fig. 5

Ajuste de ganancia de reproducción

1. La conexión del equipo de prueba se muestra en la Fig. 4.
2. Reproducir la parte ajustada de la ganancia de reproducción (315Hz, 0dB) de la cinta de prueba (QZZCFM).
3. Ajustar RV1 (CH-I) (RV2 (CH-D)) de manera que la salida esté dentro de la estandar.

Valor estandar: $0,4 \pm 0,5\text{dB}$ (0,02V)

Respuesta de frecuencia total

1. La conexión del equipo de prueba se muestra en la Fig. 6.
2. Poner el interruptor selector de cinta en la posición "normal".
3. Colocar una cinta virgen normal (QZZCRA) y grabar aplicando señal (50Hz, 100Hz, 200Hz, 500Hz, 1kHz, 4kHz, 8kHz y 10kHz), 20dB atenuada de la señal de nivel de entrada de referencia (1kHz, -24dB).
4. Reproducir la señal grabada en el paso 2 y comprobar que el nivel de cada frecuencia de salida esté dentro de la gama mostrada en la Fig. 7. en comparación con la frecuencia de referencia (1kHz).
5. Si no está dentro de la gama estandar, ajustar la corriente de polarización mediante RV101 (CH-I) (RV102 (CH-D)) de manera que el nivel de frecuencia esté dentro del estandar.
 - Subir el nivel en la gama de alta frecuencia..... Incrementar la corriente de polarización.
 - Bajar el nivel en la gama de alta frecuencia..... Disminuir la corriente de polarización.
6. Despues de eso, incrementar la señal grabada en la cinta virgen CrO₂ (QZZCRX) y la cinta virgen metálica (QZZCRZ) hasta 12,5kHz y ajustar de la misma manera como mencionado arriba y comprobar que el nivel de frecuencia esté dentro de la gama mostrada en la Fig. 8.

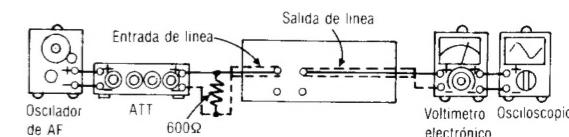


Fig. 6

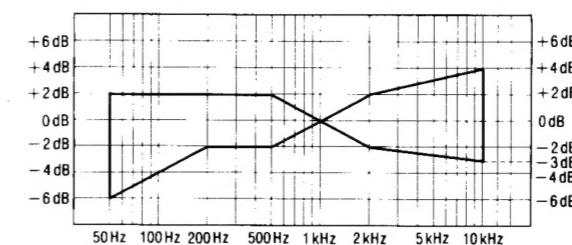


Fig. 7

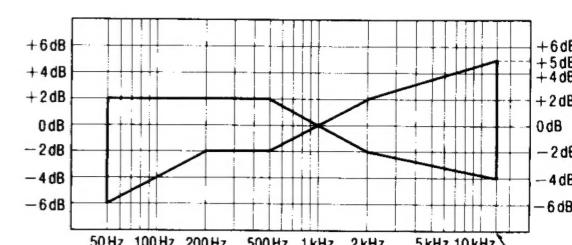


Fig. 8

Ajuste de ganancia total

1. La conexión del equipo de prueba se muestra en la Fig. 6.
2. Poner el interruptor selector de cinta en la posición "normal".
3. Colocar una cinta virgen normal (QZZCRA) y aplicar la señal de nivel de entrada de referencia (1kHz, -24dB) en la modalidad de pausa de grabación.
4. Ajustar la salida 0,42V mediante atenuador y, luego, grabar.
5. Reproducir la señal grabada en el paso 3 y comprobar que la salida esté dentro de la estandar.
6. Si no está dentro de la estandar, ajustar RV3 (CH-I) (RV4 (CH-D)) y repetir el paso (2), (3) y (4) hasta que la salida esté dentro de la estandar.

Valor estandar: $0,4V \pm 0,05V$

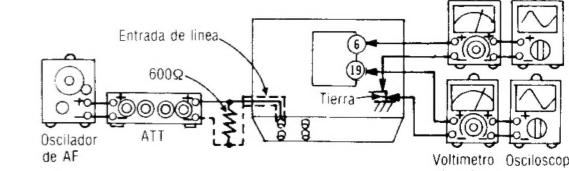


Fig. 9

Circuito RR Dolby

1. La conexión del equipo de prueba se muestra en la Fig. 9.
2. Colocar una cinta normal y aplicar señal 5kHz en la modalidad de pausa de grabación.
3. Ajustar mediante atenuador de manera que la salida entre terminal ⑥ (CH-I) (terminal ⑯ (CH-D)) de IC403 y tierra sea 12,3mV.
4. Prender el interruptor RR y comprobar que el nivel cambia como especificado por el nivel en la modalidad de salida RR.

Valor estandar: $8 \pm 1,5\text{dB}$